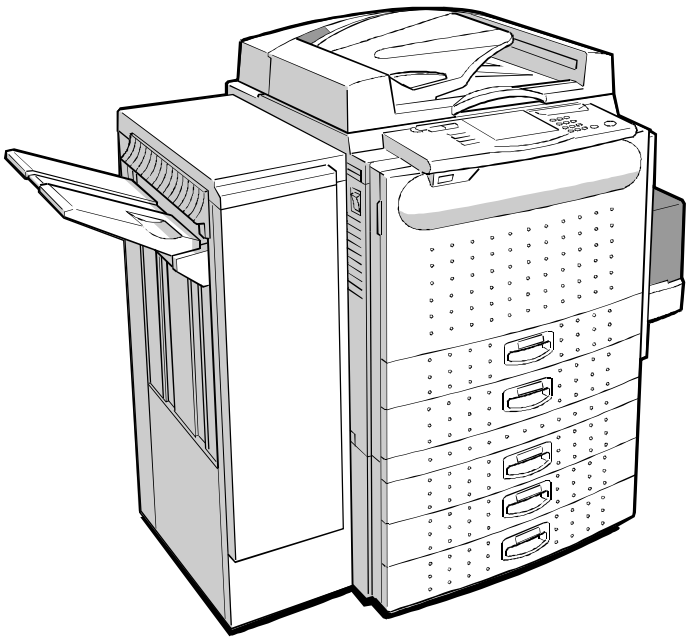
Scanner Kit Type401

Scanner Reference



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INTRODUCTION

This manual contains detailed instructions on the operation and maintenance for the scanning capabilities of the machine. To obtain maximum versatility from this scanner, all users should carefully read and follow the instructions contained in this manual.

Make sure to read the “Safety Information” section of this manual before using the machine as a scanner. It contains important information related to user safety and to preventing equipment problems.

Overview

The multifunctional machine, in addition to providing you with outstanding copying capabilities, allows you to print data received from a host computer and to perform Small Computer Systems Interface (SCSI) scanning. The scanning capability allows you to scan data through a SCSI connection to your host computer.

The machine provides numerous scanning features and includes an Auto Reverse Document Feeder (ARDF) that allows you to scan multiple pages and double-sided originals.

Using This Manual

This manual explains how to configure and use the machine as a scanner. This section contains a list of the contents of this manual, the conventions used throughout the manual, and various publications that may be of further use to you when using the machine as a scanner. ☛ Refer to the *General Reference Guide* and the *Copier Reference Guide* for basic information on the machine and for information on using the machine as a copier. . ☛ Refer to the *Printer Reference Guide* for information on using the machine as a printer.

Contents

This guide contains the following chapters and appendices:

- **Chapter 1: Setting up the scanner** - provides information on preparing to use the machine as a scanner.
- **Chapter 2: Control panel** - describes how you use the main buttons to control the scanner functions.
- **Chapter 3: Troubleshooting** - contains a list of the error messages that may display and the actions you take to eliminate errors.
- **Chapter 4: Specifications** - contains hardware specifications for the scanner and SCSI interface specifications.

A glossary is provided at the end of this manual.

Conventions

The following conventions are used throughout this manual:

Square brackets - the names of the hard and soft keys and the buttons available on the machine and on the your host computer are shown in square brackets. For example, the **[Interrupt]** button.

Italics - names of documents are shown in italics. For example, *Scanner Reference Guide*.

☛ indicates that the following text refers to additional sections and chapters that contain further information about the topic.

Keys that can be selected on the current menu display on the Control Panel in this manner.

Keys that have been selected on the current menu display on the Control Panel in this manner.

Keys that cannot be selected on the current menu display on the Control Panel in this manner.

Note: *In general, "Notes" provide general information to help you complete a task or further understand the text.*

⚠ ***CAUTION:*** *In general, "Cautions" provide information important in preventing damage to your equipment, or to avoiding a situation that may cause minor injury to you.*

⚠ ***WARNING:*** *In general, "Warnings" provide information important in alerting you to a situation that may cause serious injury to you and major damage to your equipment and property if instructions are not followed correctly.*

This symbol displays to notify you that the component may be very hot and should not be touched

In accordance with the ISO Standard 7001, this main switch symbol means "Stand By" or "Please Wait."

In accordance with the ISO Standard 7001, this main switch symbol means "Power On."

In accordance with the ISO Standard 7001, this main switch symbol means "Power Off."

This display symbol means "Ready."

Related Documents

General Reference Guide

Copier Reference Guide

Printer Reference Guide

Network documentations

User Guide for Printer Servers

General Information

The following information is provided for your general knowledge:

- Some of the illustrations contained in this manual may differ slightly from your machine.
- Some of the options described in this manual may not be available in your country. Contact your local dealer for details on the options available to you.
- ☛ Refer to the *Copier Reference Guide* for basic information on the machine and for information on using the machine as a copier.

1. SETTING UP THE SCANNER

REQUIREMENTS

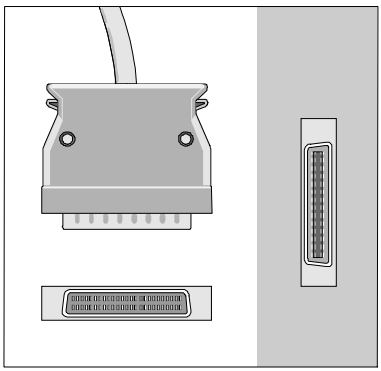
Before you can use the machine as a scanner you must make sure that you have met all of the environmental and electrical requirements. You must also connect the machine to your host computer using the Small Computer Systems Interface II (SCSI II) connection and attach the SCSI II terminator to the top port on the machine. Make sure that you have all of the cables, connectors, and electrical outlets necessary to attach the machine to your host. ☛ Refer to the "Connecting the Scanner to the Host" section in this chapter for further information.

SCSI II Requirements

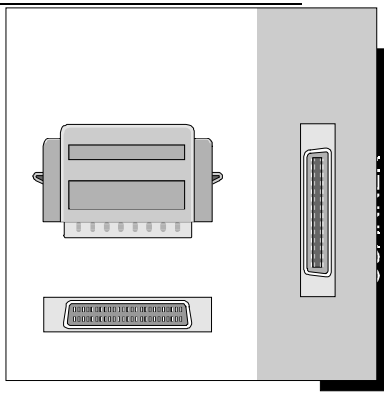
You connect the machine to your host computer using a high density 50-pin SCSI II cable connected to a SCSI II port available on your host computer. It is your responsibility to make sure that you have a SCSI II port available on the host computer and to provide the SCSI II cable. In addition, you must provide and connect a SCSI II terminator to the remaining SCSI II port on the machine. When a SCSI II terminator is not connected when the scanner is installed, the scanner will not initialize when the machine is turned on.

The SCSI II cable is not provided with the machine. However, two ferrite cores, designed to screen electromagnetic interference, are provided with the machine. You must attach a ferrite core around each end of the SCSI II cable. The SCSI II terminator is provided with the scanner option package. ☛ Refer to the "Specifications" chapter in this manual for further information.

The SCSI II connection is a SCSI II interface and requires a high density 50-pin SCSI II cable and a SCSI II port available on the host computer.



The terminator is a standard SCSI II Terminator. You must connect the terminator when the scanner option is installed or the scanner will not function.



⚠ ***CAUTION:*** *When you use the machine as a scanner, you should always turn on the machine before you turn on the host computer.*

☛ Refer to the “Specifications” chapter in this manual for the cable specifications.

CONNECTING THE SCANNER TO THE HOST

When you have obtained the necessary SCSI II cable, connector and terminator plug, you can connect the machine to the SCSI II port available on your host computer.
***Note**: You must have a SCSI II port available on your host computer.*

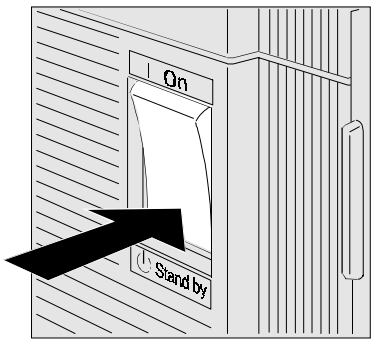
☛ Refer to the “Using the Control Panel” chapter in this manual for information on setting the SCSI ID.

Connecting the SCSI II Cable and Terminator

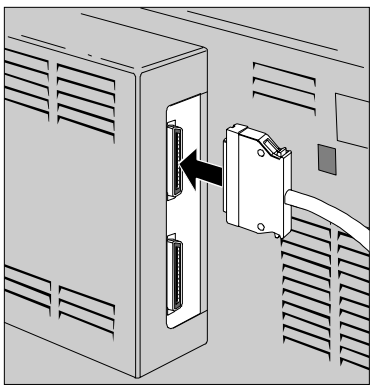
Follow these steps to connect the machine to your host:

1. Make sure you have the SCSI II cable necessary for the connection.

2. Make sure that both the machine and the host computer are turned off.

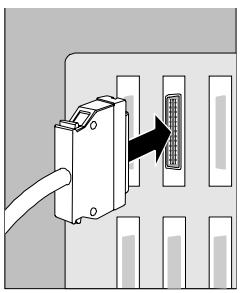


3. Connect one end of the high density 50-pin SCSI II cable to a SCSI II port on the back of the machine.



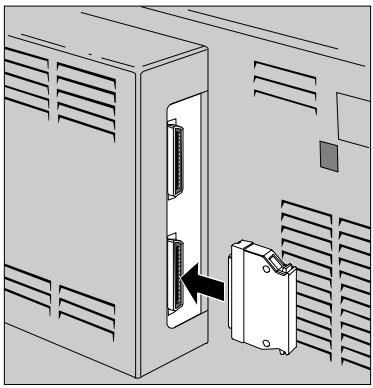
4. Press the connector until it snaps in place. This is to make sure that the cable remains in position.

5. Connect the other end of the high density 50-pin SCSI II cable to the SCSI II port on the back of the host computer or other SCSI peripheral.

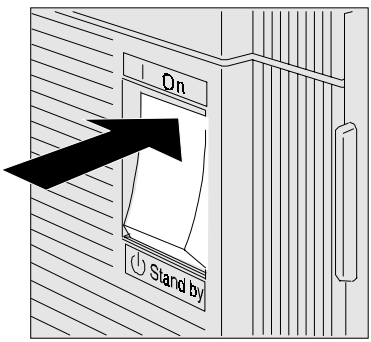


6 Press the connector until it snaps in place. This is to make sure that the cable remains in position.

7 Connect the high density SCSI II Terminator to the remaining SCSI II port on the back of the machine. When a SCSI II terminator is not connected when the scanner is installed, the scanner will not initialize when the machine is turned on.



8 Plug in the power cords and turn on the power to the machine.



9 Plug in the power cords and turn on the host computer.

INSTALLING THE DRIVERS

You must install the scanner driver software on the host computer before you can use the scanner.

☛ Refer to the “On-line help files of drives” for further information on operating the scanner.

Installing the CFM TWAIN Scanner Driver

This section contains the procedure you follow to install the TWAIN scanner driver on your Windows 3.1, Windows 95 or Windows NT system.

Installing the TWAIN Scanner Driver on Windows

Follow these steps to install the TWAIN scanner driver on your Windows system:

1. Close any applications that are currently running.
2. Insert the “CFM TWAIN Scanner Drivers for Windows” diskette into the 3.5 inch disk drive on your host computer.
3. Run the **setup.exe** program on the diskette.
4. Follow the installation instructions that display on the screen.

Installing the ISIS Scanner Driver

Please refer to the “Installing Scanner Drivers” section in the PixView User’s Guide.

TESTING

When you have attached the machine to the host computer you can test the connection and the scanning functions using the scanner driver.

***Note**: You may have to first configure the machine for scanning. You do so using the scanner driver screens.*

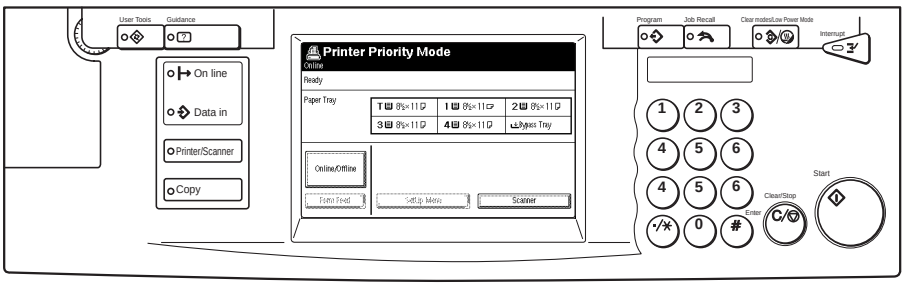
2. USING THE CONTROL PANEL

CONTROL PANEL FUNCTIONS

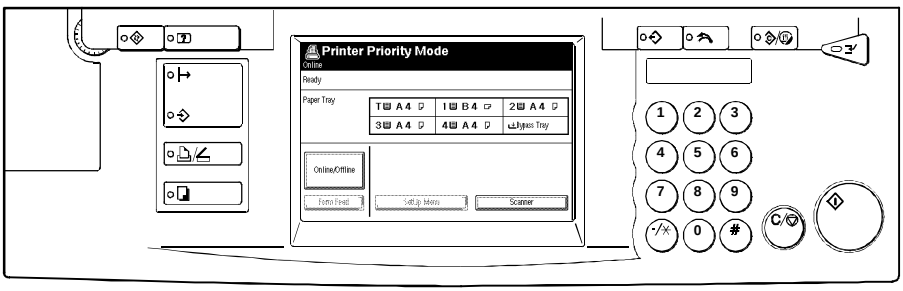
This chapter describes how you use the main buttons and menus to use the scanner.

You use the main buttons on the left side of the Control Panel and the menu selections that display on the Control Panel screen to access the Scanner mode. You use the scanner driver on the host computer to specify how you want the scanner to function.

Control Panel (U.S. Version)



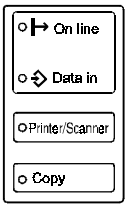
Control Panel (European Version)



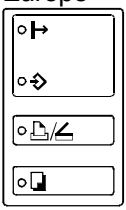
The Control Panel display is shared by all functions of the machine and displays the current status of the copy, print jobs, as well as when the machine is in scan mode. When you are in scan mode, the Control Panel displays the *"The machine is now in Scanner mode. If you wish to use the printer, press [Exit] to leave Scanner mode."* message. When the scanner is idle, the Control Panel displays the status for the copier. The "Status" area is blank when the status of the machine is off-line.

Using the Buttons and Screens

U.S.

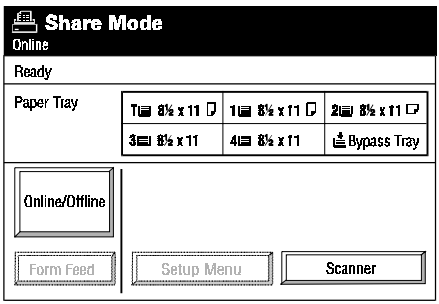


Europe

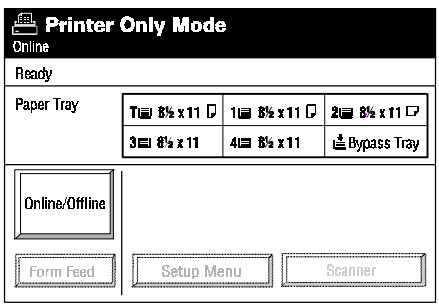


The machine has two light emitting diode (LED) indicators and two main buttons located on the left side of the Control Panel and a display area that specifies when you are in Scanner mode.

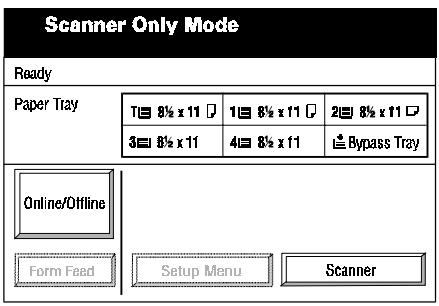
The top of the Printer mode menu displays the current mode of operation. These modes are as follows:



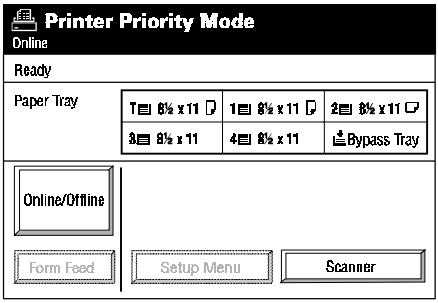
❒ **Share Mode** - indicates that you want to share the machine between copy, print, and scan modes with no specific priority.



❒ **Printer Only Mode** - indicates that you currently want to use the machine as a printer only.



❒ **Scanner Only Mode** - indicates that you currently want to use the machine as a scanner only.



❒ **Printer Priority Mode** - this indicates that you want all print jobs to take priority. In this mode normal copying, printing, and scanning is enabled, and copy interrupt is disabled.

Setting the SCSI ID

You must specify the SCSI ID from the machine before you can use your scanner. Follow these steps to specify the SCSI ID for your scanner:

1. Access the Setup menu, by pressing the **[Setup Menu]** button from the Printer mode menu.
2. Access the Configuration menu by pressing the **[Configuration Menu]** button from the Setup menu.
3. Access the SCSI ID Setting screen by pressing the **[Change]** button located next to the SCSI ID option on the Configuration menu.

The options are as follows:

- ❒ **0**
- ❒ **1**
- ❒ **2**
- ❒ **3**
- ❒ **4**
- ❒ **5**
- ❒ **6**
- ❒ **7**

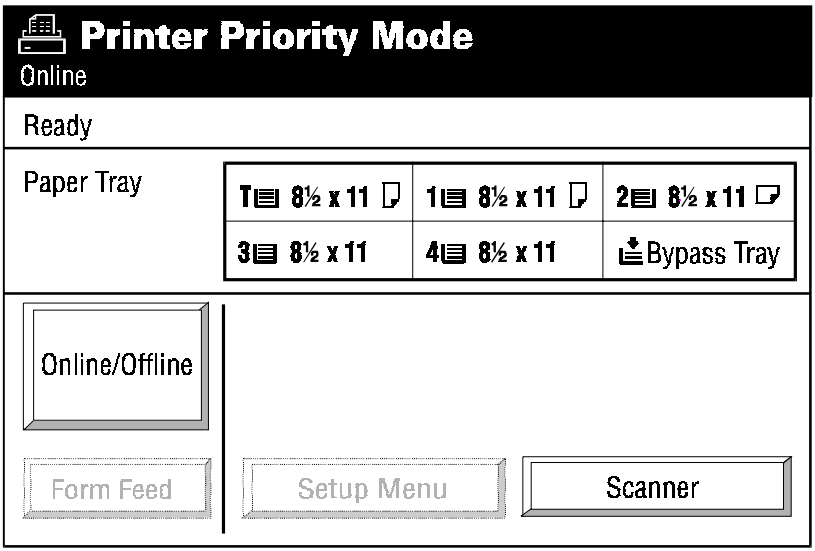
The default is **3**.

4. Select the number that specifies the correct SCSI ID for your scanner and press the **[Exit]** button to save the setting and return to the Configuration menu.
5. Press the **[Exit]** button as many times as necessary to return to the Printer mode menu.

Entering Scanner Mode

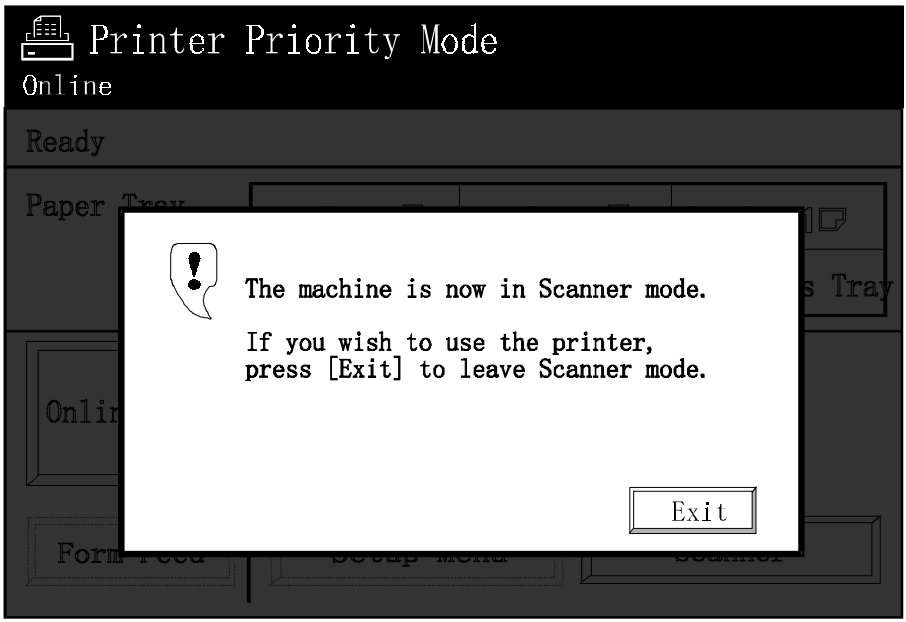
When you first turn on the machine, the Copy Menu displays on the Control Panel. To access the Scanner mode, you must press the **[Printer/Scanner]** button located on the left side of the display panel and press the **[Scanner]** button on the Printer mode menu screen. The scanner is now ready to use.

Note: *You can not use the scanner function when the machine is set to Printer only mode.*



Exiting Scanner Mode

From the Scanner mode screen, press the **[Exit]** button.



3. TROUBLESHOOTING

OVERVIEW

This chapter provides information that may be helpful when clearing problems and information on the error messages that may display while you are using the machine as a scanner.

SCANNER PROBLEMS

This section contains information on the problems that may occur while using the scanner, as well as the actions you can take to solve the problems.

Table 3-1 lists the basic problems that may occur with your scanner and the actions you can take to correct the problems.

Table 3-1 Basic problem resolution

Condition	Action
The machine does not activate when the main switch is turned on.	Make sure that the power cord is properly plugged in to an appropriate power outlet.
The machine has turned off.	Turn on the main switch.
Scanner is sending fragments or confusing data to the host computer	Verify that you have the correct interface cable. Verify that you have the SCSI Terminator attached correctly.
displays.	Close the indicated door or cover.
displays.	Turn off the main switch, wait a few seconds and turn the machine on again. If this symbol displays again, contact your service representative.

Table 3-2 lists the scanner conditions that may occur, and the action you can take to correct the conditions.

Table 3-2 Scanner condition resolution

Condition	Action
Frequent misfeeds	Verify that the size and weight of the paper you are using meets the paper specifications for the Auto Reverse Document Feeder (ARDF). Verify whether the paper is folded, wrinkled, damp, or curled. Verify that the paper is correctly placed in the ARDF tray. Check for any pieces of misfed paper or other foreign objects in the machine. Verify that the page size setting is correct for the paper contained in the feeder tray.

When you encounter a scanner problem and none of the information available in this section solves the problem, contact your Service Representative. Attempting to repair the machine yourself is not covered by the warranty and may cause further damage to the machine. When you contact your Service Representative, make sure to have the following information available:

- ❒ A record of the problem that occurred and the steps you took to eliminate the problem
- ❒ The name and number of the machine
- ❒ Configuration information for the scanner
- ❒ Information on the scanner driver you are using.

ERROR MESSAGES

The ONLINE operation screen of the machine contains three fields and two buttons. The current operation mode displays in the top field. The operating status (which contains the READY status) displays in the next field. The third field contains system messages and is blank during normal operation. When a unique condition occurs, this field displays the error messages.

Table 3-3 lists the messages that display in this field and provides an indication of what occurred to cause the message, and the action you can take to eliminate the error.

Table 3-3 Error messages

Message	Description	Action
Controller error. Please call for Service.	A problem has occurred with the controller causing a diagnostic error during power on.	Contact your service representative. Although the scanning function is not available, you can use the copy function of the machine by pressing the **[COPY]** button.
SCSI communication error. Please set up communication parameters again.	A SCSI port communication error occurred during scanning.	Check the SCSI port. When the SCSI port problem is fixed, press **[Continue]** to resume scanning or press **[Reset]** to cancel the scan job.

4. SPECIFICATIONS

SCANNER

This section contains the electrical and hardware specifications for your scanner as well as information on the paper feed capabilities provided by the Auto Reverse Document Feeder (ARDF).

Electrical and Hardware Specifications

This section contains the electrical and hardware specifications for your scanner. Table 4-1 lists the basic scanner information and specifications.

Note: *All specifications are subject to change without notice.*

Table 4-1. Basic scanner information

Component	Specification
Resolution:	400 dpi (100 to 1600 dpi internal conversion)
Gray scale:	256 levels
Power source:	120V, 60Hz, more than 12.0A (15 or 20 AMP circuit) (U.S.) 220 to 240V, 50 to 60Hz, more than 6.5A (15 or 20 AMP circuit) (Europe)
Power consumption:	Warm-up - less than 0.90 kW Stand-by - less than 0.22 kW Maximum - less than 1.440 kW (U.S.) less than 1.495 KW (Europe)
Noise emission: Sound pressure level	Stand-by - 25 dB (A) Scanning - 59 dB (A) * The measurements are made according to ISO 7779 at the operator position)
Noise emission: Sound power level	Stand-by - 40 dB (A) Scanning - 69 dB (A) * The measurements are made according to ISO 7779 at the operator position)
Standard SCSI interface:	High density 50-pin SCSI cable and SCSI Terminator plug. SCSI port must be available on the host computer.

INTERFACE

This section provides information on the high density 50-pin SCSI cable you use to connect your scanner to your host computer and on the SCSI Terminator plug you use on the machine. It is your responsibility to make sure that you have a SCSI port available on the host computer and to provide the SCSI cable. In addition, you must provide and connect a SCSI terminator plug to the top SCSI port on the machine. The SCSI cable and SCSI Terminator are not provided with the machine.

Refer to the "Setting up the Scanner" chapter in this manual for information on how to connect the scanner to your host computer.

SCSI Interface

The SCSI connection is a standard SCSI interface and requires a high density 50-pin SCSI bus and tag cable with an A Connector and a SCSI port available on the host computer. The terminator is a standard SCSI Terminator.

Table 4-2 lists the high density 50-pin designations and associated signals for SCSI communications.

Table 4-2. high density 50-pin SCSI pin designations

Code	Signal	Pin
GND	Signal Ground	1
GND	Signal Ground	2
GND	Signal Ground	3
GND	Signal Ground	4
GND	Signal Ground	5
GND	Signal Ground	6
GND	Signal Ground	7
GND	Signal Ground	8
GND	Signal Ground	9
GND	Signal Ground	10
GND	Signal Ground	11
RESERVED	Reserved	12
(N/C)	(Not Connected)	13

Code	Signal	Pin
RESERVED	Reserved	14
GND	Signal Ground	15
GND	Signal Ground	16
GND	Signal Ground	17
GND	Signal Ground	18
GND	Signal Ground	19
GND	Signal Ground	20
GND	Signal Ground	21
GND	Signal Ground	22
GND	Signal Ground	23
GND	Signal Ground	24
GND	Signal Ground	25
DB<0>	Data	26
DB<1>	Data	27
DB<2>	Data	28
DB<3>	Data	29
DB<4>	Data	30
DB<5>	Data	31
DB<6>	Data	32
DB<7>	Data	33
DB<P>	Data	34
GND	Signal Ground	35
GND	Signal Ground	36
RESERVED	Reserved	37
TERMPWR	Term Power	38
RESERVED	Reserved	39
GND	Signal Ground	40
-ATN	Attention	41
GND	Signal Ground	42
-BSY	Busy	43
-ACK	Acknowledge	44
-RST	Reset	45
-MSG	Message	46
-SEL	Select Out	47
-C/D	Control/Data	48
-REQ	Request	49
-I/O	Input/Output	50

Table 4-3 lists the SCSI Terminator specifications.

Table 4-3. SCSI Terminator specifications

Component	Specification
A Cable Single-Ended Active high density 50-pin Scanner Terminator	SCSI-2, low profile, high density narrow terminator with internal shield and all plastic cover.

GLOSSARY

ACRONYMS

This section contains a list of the acronyms you may use while working with the scanner and the scanner documentation.

ARDF	Auto Reverse Document Feeder
bpi	bits per inch
bps	bits per second
cpi	characters per inch
dpi	dots per inch
DRAM	Dynamic Random Access Memory
EBDCIC	Extended Binary Coded Decimal Interchange Code
EEPROM	Electronically Erasable Programmable Read Only Memory
IBM	International Business Machines
I/O	Input/Output
LED	Light Emitting Diode
lpi	lines per inch
MB	Megabyte
PC	Personal Computer
ppm	pages per minute

RAM	Random Access Memory
RIP	Raster Image Processor
ROM	Read Only Memory
SCSI	Small Computer Systems Interface
SIMM	Single Inline Memory Module
spi	spots per inch

TERMS

This section contains a list of the terms you may use while working with the scanner and the scanner documentation.

application	Software program, or programs used to process information.
asynchronous	Data communication transmissions that are controlled by start and stop characters, causing the time intervals between the transmission of data blocks to be unequal in length.
baud rate	Establishes the transmission speed of data for a serial connection between the machine and a host computer.
bit	Abbreviation for a binary digit. This is the smallest unit of information recognized by a computer.
bps	Bits per second. The rate at which data is transferred during serial communication.
buffer	Area of memory used for storage during the transfer of data between two devices.

byte Number of bits (usually fixed at 8) that are processed as a single binary value.

configuration Settings required to allow your computer to communicate properly with the machine. Also describes the process of specifying the required settings.

cpi Characters per inch. Expression of the fixed-pitch font size that allows the font to be set in increments of one horizontal inch. See also *pitch*.

default Value retained in memory for use when input is not specified by the user for a required variable.

dot Scanned element (in pixels). The number of dots scanned per inch is used to measure the total resolution (300 dots per inch).

dpi Dots per inch. The number of dots that scan in an inch. These are used to form a character or graphic on the scanned page.

drivers Software used to provide scanner characteristics.

duplex Scanning both sides of a single sheet of paper.

image area Area of the scanned page that can contain graphics or text.

initialize Setting all computer system information to the starting or default values.

landscape Orientation in which graphics and text are scanned parallel to the long edge of the page.

long-edge feed Moving the paper through the scanner in the direction of the paper length.

MB Megabyte. Unit made up of one million bytes.

orientation Specifies whether the lines on the scanned output are parallel to the long edge of the paper (landscape) or the short edge of the paper (portrait).

origin Upper left corner of a page.

physical page Actual page size.

pica 1. Unit of measurement equal to twelve points or approximately 1/6 of an inch. 2. 10-pitch typeface with ten characters per inch each 12 points in height. See also *point*.

pitch Width of a fixed-pitch font specified in characters per horizontal inch.

pixel Acronym for a single element of a picture. This is the smallest addressable point on a bitmapped screen to which color and intensity can be assigned independently.

point Unit of measure that is equal to 0.0139 of an inch. Used to express type, size, and leading spaces. There are 12 points to a pica and approximately 72 points to an inch. See also *pica*.

RAM Random Access Memory. Portion of memory where data, macros, and downloaded fonts are stored.

raster graphics Graphic created using a pattern of dots.

Raster image processor Processor board (RIP) that builds a raster image that is passed to the scanner.

rasterization Transformation of an image onto a page using bitmap dots.

resolution Number of dots per inch (dpi) or spots per inch (spi). The greater the number of dots or spots per inch, the higher the resolution and the clearer the image. The terms dots, spots, and pixels are synonymous.

scale Adjusting font or image size according to specified proportions.

Scanner driver Software that allows a host computer to communicate with a scanner.

short-edge feed Moving the paper through the scanner in the direction of the paper width (the short side of the paper).

simplex Scanning one side of a single sheet of paper.

spot Single element of a picture imaged by the scanner (also called a dot or a pixel).

throughput Measure of the number of pages scanned during a specific unit of time, usually expressed as pages per minute.

truncated Cut off before completion, as when data transfer from a scanner to a host is canceled before all data is transmitted.

typeface Features that give the font type a uniform appearance.

weight Perceived blackness of a character affected by varying the width of the stroke. Weight is expressed in general terms as either bold or roman.

Printed in USA
A6518607

INTRODUCTION

This manual contains detailed instructions on the operation and maintenance of this copier. To get maximum versatility from this copier all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

Please read the "SAFETY INFORMATION" section in the "General Reference" before using this machine. It contains important information related to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.

WHERE IS IT & WHAT IS IT

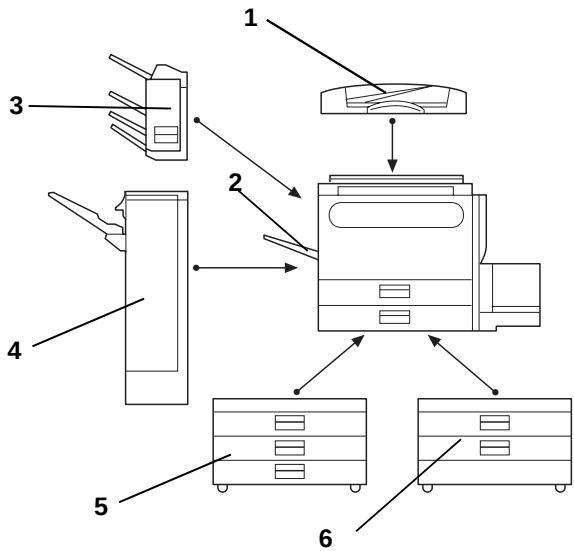
SYSTEM OVERVIEW (For Copy Mode) **3**

COPIER EXTERIOR & INTERIOR **4**

OPERATION PANEL **6**

Hard Keys 6
Touch Panel Display 8

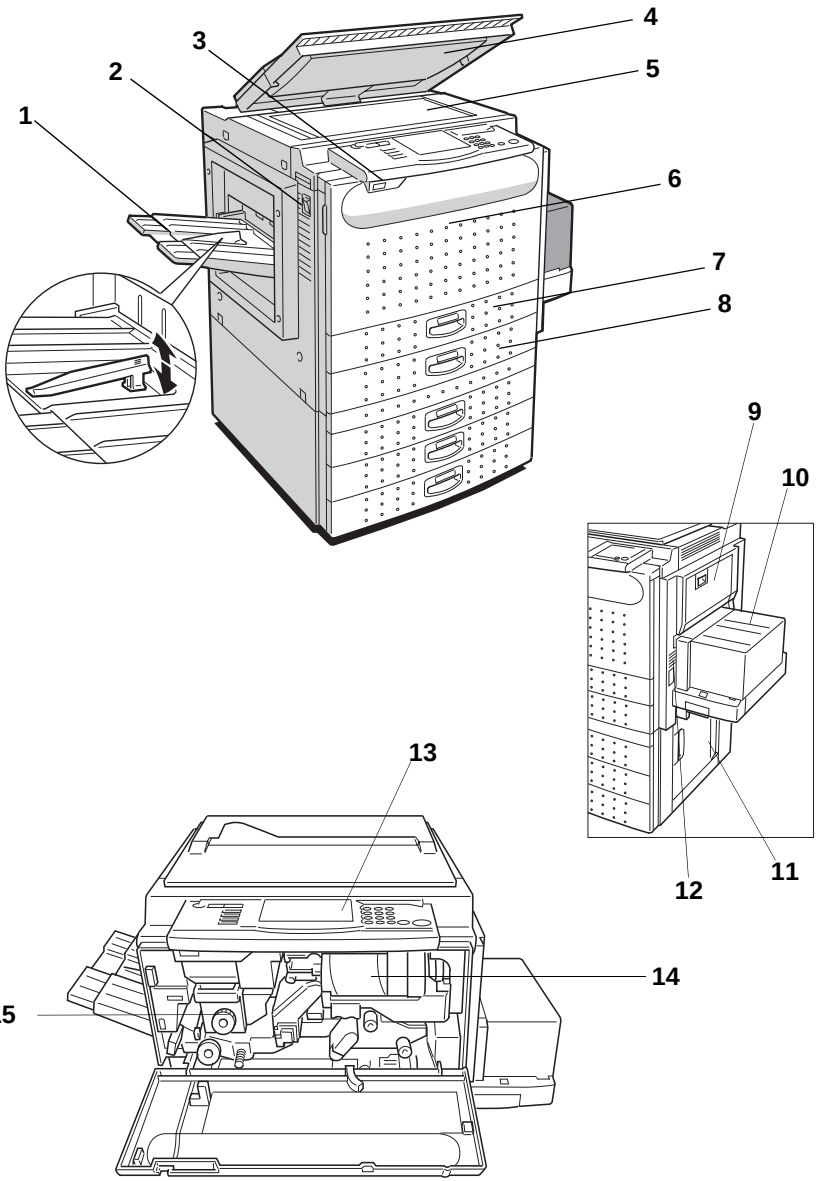
SYSTEM OVERVIEW (For Copy Mode)



1. Document feeder (Option)	Insert a stack of originals here. They will be fed automatically.
2. Copy tray (Option)	Completed copies are delivered here.
3. 3-Bin Sorter (Option)	Sorts, stacks copies.
4. Finisher (Option)	Sorts, stacks, and staples copies.
5. 1500-sheet tray unit (Option)	Holds 1500 sheets of copy paper.
6. 1000-sheet tray unit (Option)	Holds 1000 sheets of copy paper.

- ❒ Other options for Copy mode: platen cover, key counter, and copy tray.
- ❒ Regarding other options for Printer/Scanner mode, ☛ see the "General Reference".

COPIER EXTERIOR & INTERIOR



1. Copy tray (option) — Completed copies are delivered here. Regarding the capacity of the tray, ☛ see page 130.

2. Main switch — Switches the copier between on and standby conditions.

3. Auto response (human) sensor — When someone comes close to the copier, it will automatically switch from Low Power mode to standby mode.

4. Platen cover (option) — Lower this cover over originals for copying.

5. Exposure glass* — Position originals here face down for copying.
*After turning off the main switch, the exposure glass might be hot because of the anticondensation function. This is not a problem.

6. Front cover — Open to access the inside of the copier.

7. Unit for two-sided copies (Duplex unit) — Makes two-sided copies.

8. Paper tray — Holds 500 sheets of copy paper.

9. Bypass tray — Use to copy onto OHP sheets, adhesive labels, translucent paper, post cards, and non-standard size paper.

10. Large capacity tray — Holds 1,000 sheets of copy paper.

11. Right cover of the optional tray unit — Open to remove misfed paper.

12. Key counter holder — Insert the optional key counter here.

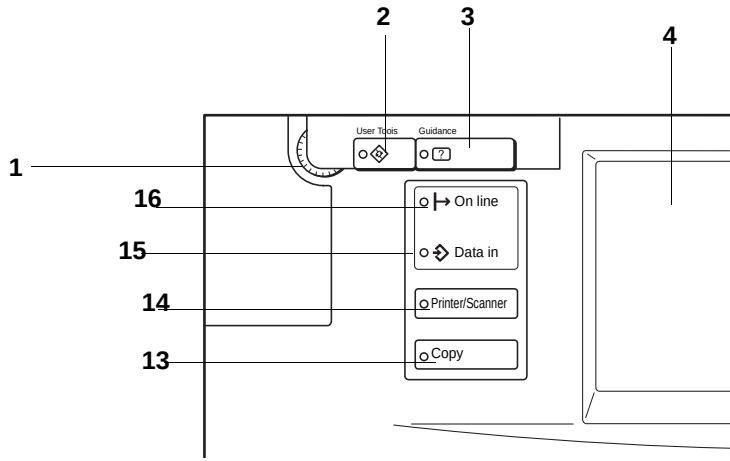
13. Operation panel — Operator controls and touch panel are located here. ☛ See the next page.

14. Toner bottle — Replace the toner bottle when " Add Toner" is displayed on the display. ☛ See "ADDING TONER" in the "General Reference".

15. Fusing unit — Fuses the copy image to the paper. When accessing the inside of the copier, use caution. This unit may be very hot.

OPERATION PANEL

Hard Keys



1. Contrast Dial
Changes the brightness of the display.

2. User Tools key
Changes the basic settings and copy features.
☛ See page 114.
☛ See "USER TOOLS" in the "General Reference".

3. Guidance key
Shows guidance for functions.
☛ See page 26.

4. Touch Panel Display
☛ See pages 8 and 24.

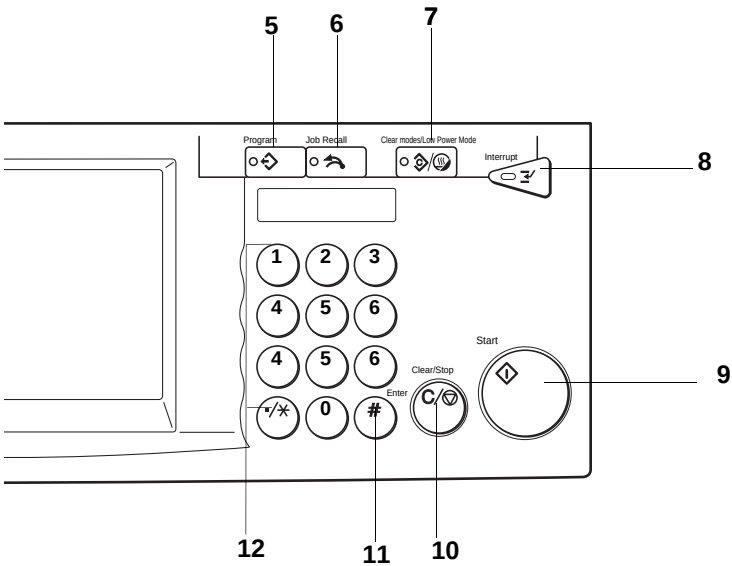
5. Program key
Press to select the program mode.
☛ See page 52.

6. Job Recall key
Use to recall your previous copy settings. ☛ See page 51.

7. Clear Modes/Low Power Mode key
Press to clear the previously entered copy job settings. Also use to switch to and from Low Power mode. ☛ See "STARTING THE MACHINE" in the "General Reference".

8. Interrupt key
Press to make interrupt copies during a copy run.
☛ See page 51.

9. Start key
Press to start copying. Use to set the Auto Start. ☛ See page 36.



10. Clear/Stop key
While entering numbers, press to cancel a number you have entered. While copying, press to stop copying.

11. Enter key
Use to enter data in selected modes.

12. Number keys
Use to enter the desired number of copies and data for selected modes.

13. Copy key
Use to enter the Copy mode from Printer/Scanner mode.
☛ See page 34.
☛ See "SWITCHING BETWEEN THE PRINTER, COPIER AND SCANNER FUNCTIONS" in the "General Reference".

14. Printer/Scanner key
Use to enter the Printer/Scanner mode from the Copy mode.
☛ See "SWITCHING BETWEEN THE PRINTER, COPIER AND SCANNER FUNCTIONS" in the "General Reference".

15. Data in indicator
☛ See the "Printer Reference".

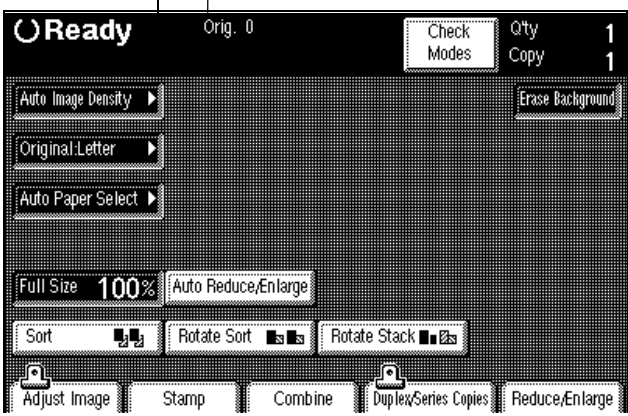
16. On line indicator
☛ See the "Printer Reference".

Touch Panel Display

with optional copy tray & with optional 3-bin sorter

Message area
Copier status and messages

Original Counter
Number of originals scanned so far.



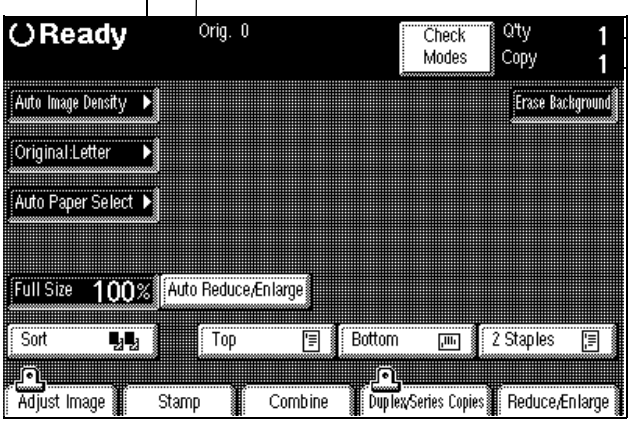
Copy Set Total
Total number of copy sets entered.

Copy Set Counter
Number of copy sets made so far.

with optional finisher

Message area

Original Counter



Copy Set Total

Copy Set Counter

- Regarding detailed information about each key and its functions, ☛ see page 11.
- For how to use the touch panel display, ☛ see page 24.

To save paper resources, the following modes are selected as a default setting as shown on the previous page.

[Duplex/Series Copies]

Duplex (from one-sided originals to two-sided copies)
Number of originals: Even
Orientation: Top to Top

[Adjust Image]

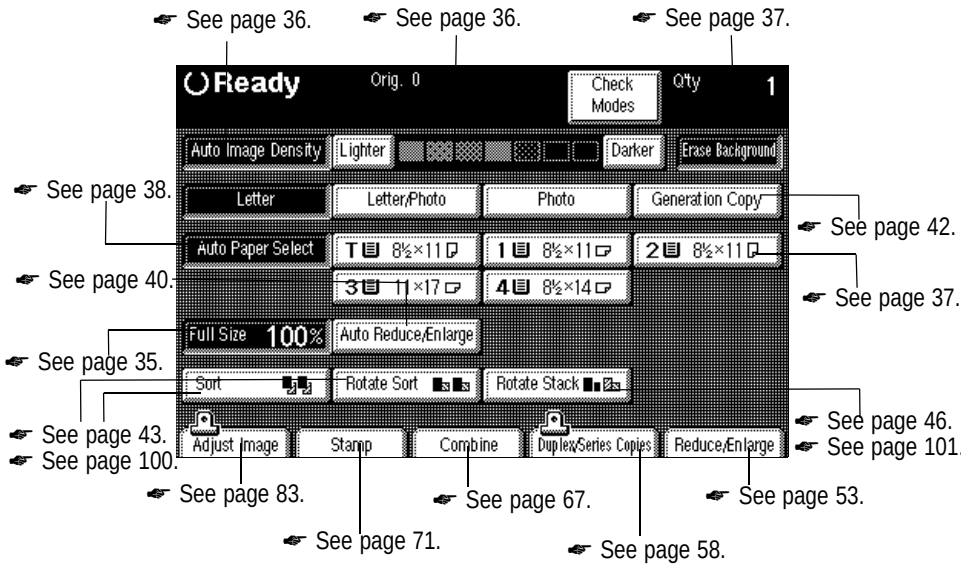
Margin Adjustment
(0.2" width margin for right side of back side)

- You can change the above default setting with the user tools. ☛ See pages 117 and 119.
- To change the Duplex mode settings, touch the **[Duplex/Series Copies]** key and change the setting.
- To change the Margin Adjustment settings, touch the **[Adjust Image]** key and change the setting.

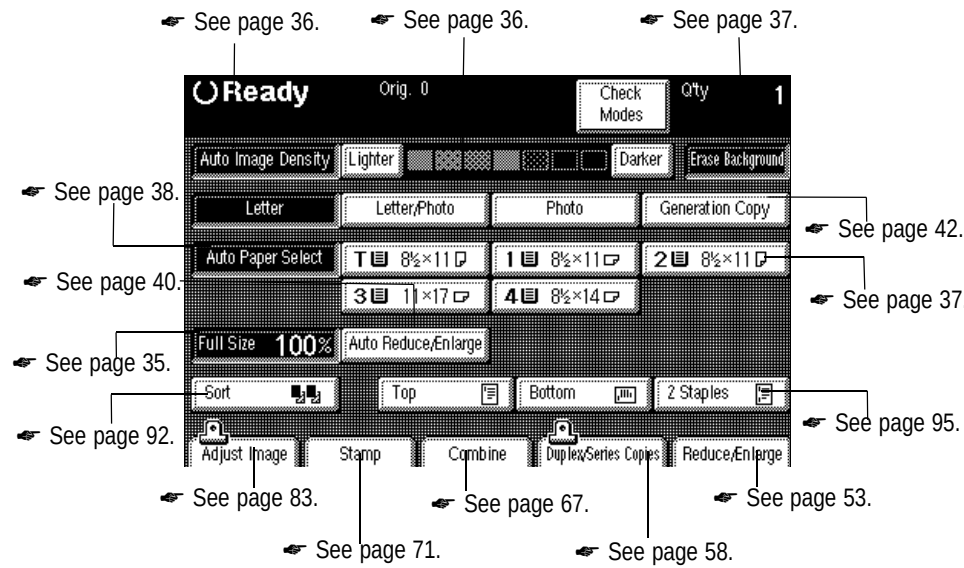
WHAT YOU CAN DO WITH THIS COPIER

FUNCTIONS

with optional copy tray & with optional 3-bin sorter



with optional finisher



Getting Help On The Display

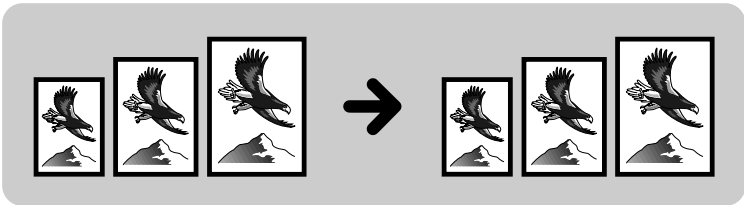
☛ See page 26.

Adjusting Copy Image Density

☛ See page 36.

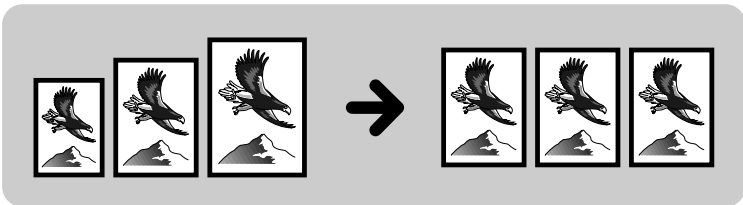
Having The Copier Choose The Paper Size

☛ See page 38.



Having The Copier Choose The Reproduction Ratios

☛ See page 40.

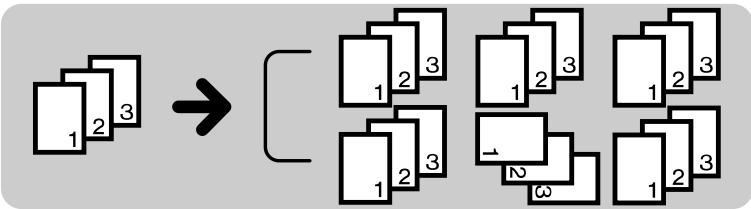


Selecting Original Type Setting

☛ See page 42.

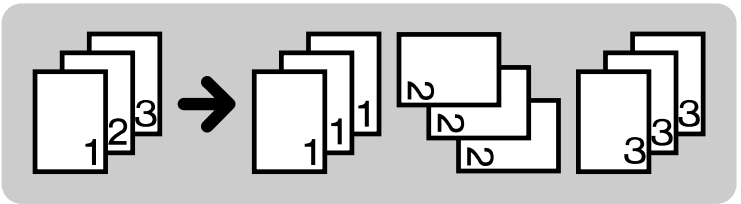
Sorting Into Sets

☛ See page 43.



Stacking Together All Copies Of A Page

☛ See page 46.



Copying From The Bypass Tray

☛ See page 48.

Temporarily Stopping One Job To Copy Something Else

☛ See page 51.

Recalling Job Settings

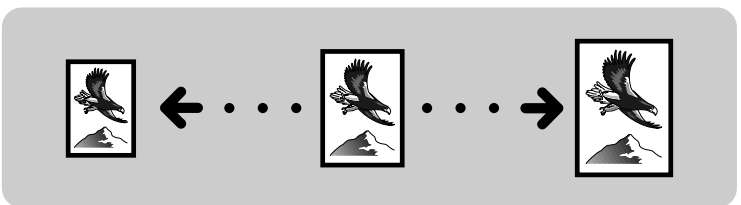
☛ See page 51.

Storing Your Copy Settings In Memory

☛ See page 52.

Reducing And Enlarging Using Preset Ratios

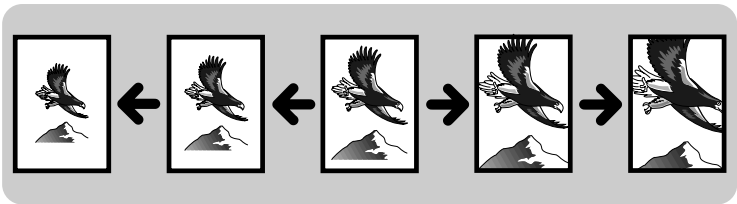
☛ See page 53.



Reducing And Enlarging In 1% Steps

☛ See page 54.

Using the [+] and [-] keys or Number keys

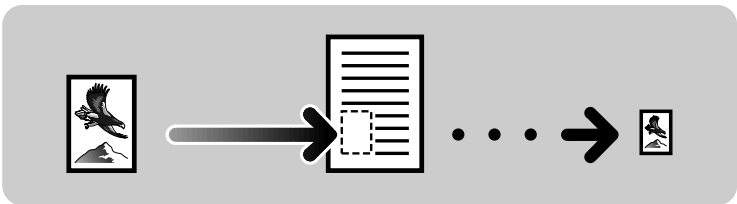


Stretching and squeezing the image

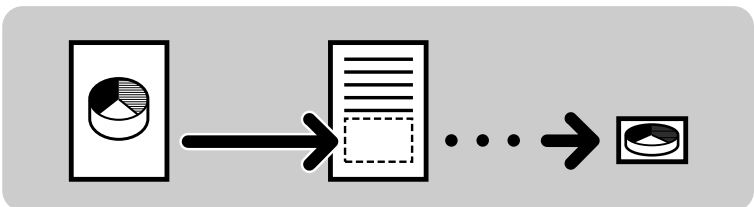
Fitting The Original To A Copy Of A Different Size

☛ See page 56.

Fitting the image in the copy area as it is



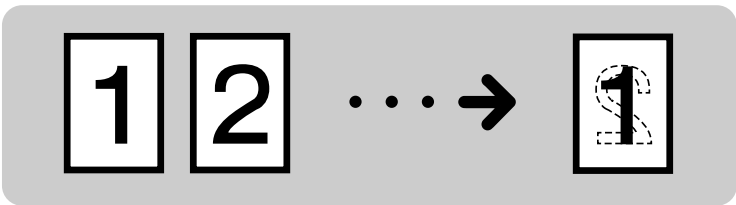
Stretching and squeezing the image into the copy area



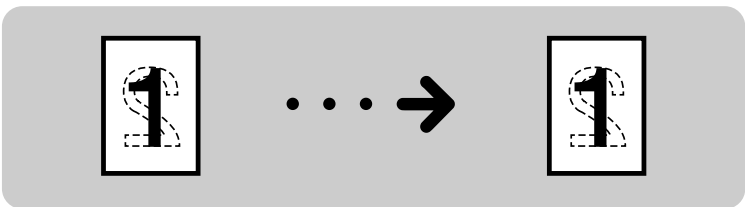
Making Two-sided Copies

☛ See page 58.

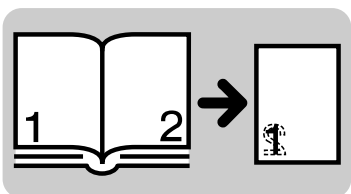
From one-sided originals

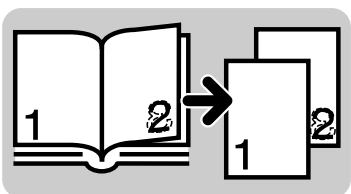


From two-sided originals



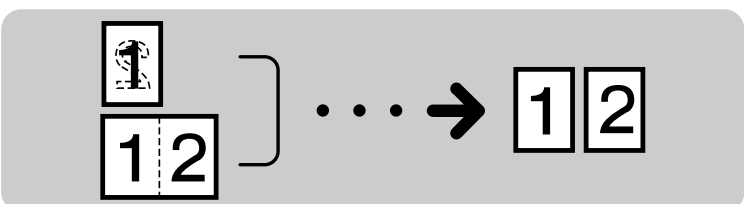
From book originals (Single) **(Multi)**





Making One-sided Copies

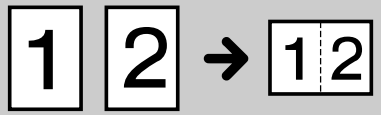
☛ See page 65.



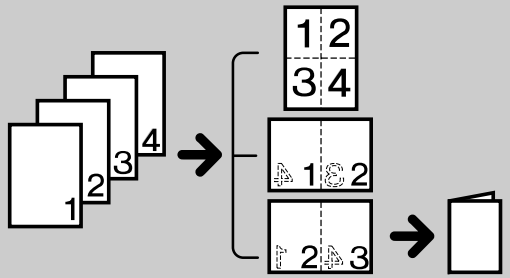
Combining Originals Into One Copy

☛ See page 67.

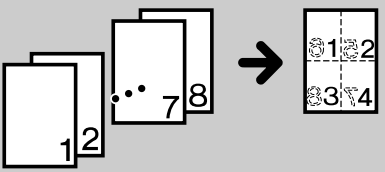
From 2 one-sided originals



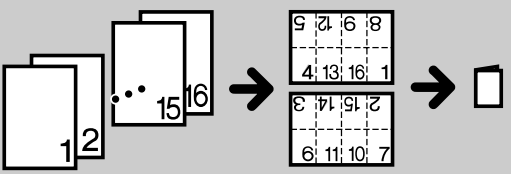
From 4 one-sided originals



From 8 one-sided originals

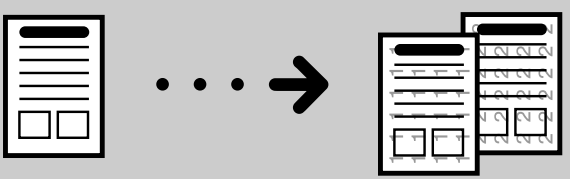


From 16 one-sided originals



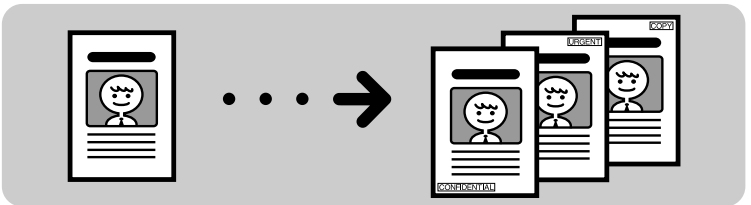
Printing Numbers On The Background Of Your Copies

☛ See page 71.



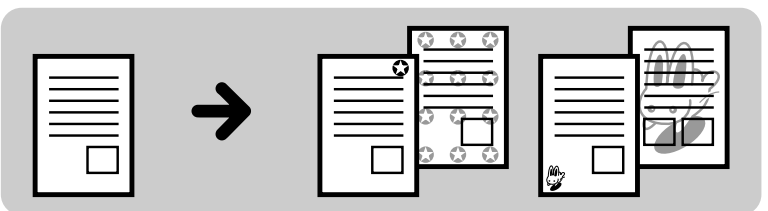
Printing Preset Messages On Your Copies

☛ See page 72.



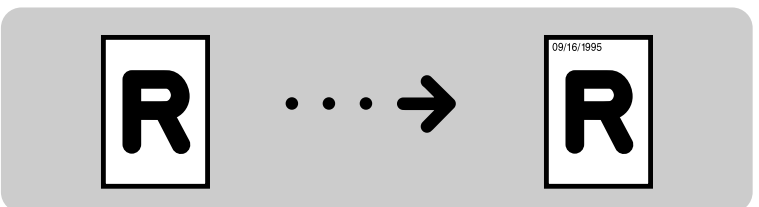
Printing Your Own Messages On Your Copies

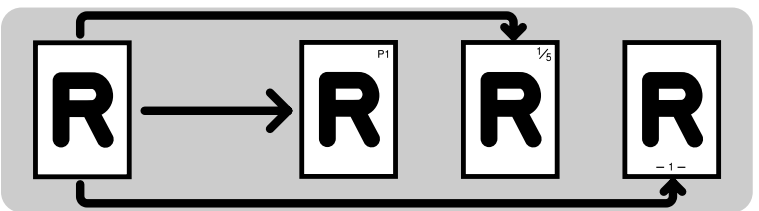
☛ See page 76.



Printing Dates And Page Numbers

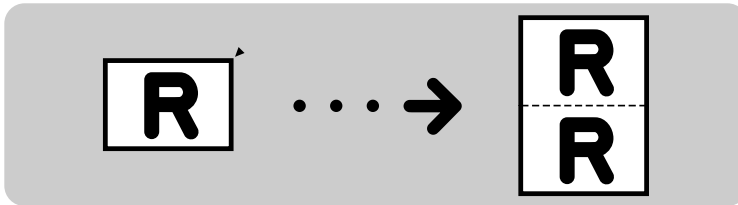
☛ See page 78.





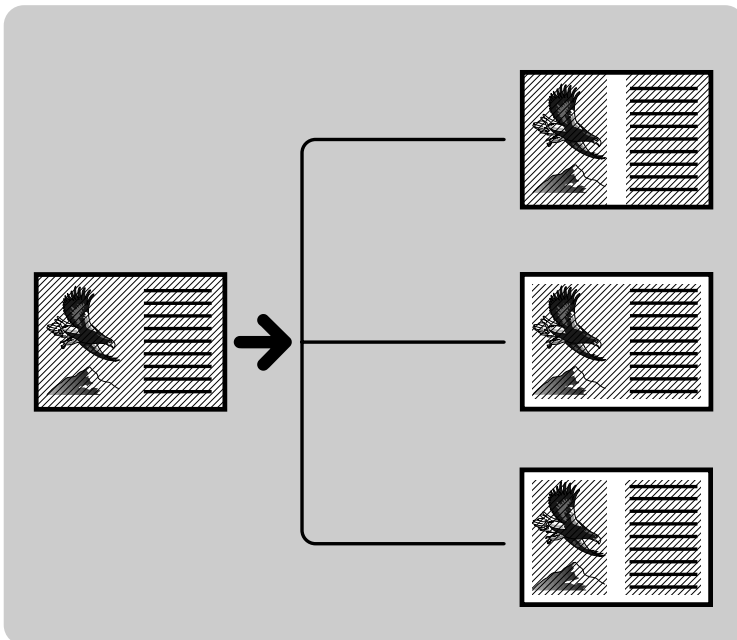
Copying The Image Twice On One Page

☛ See page 83.



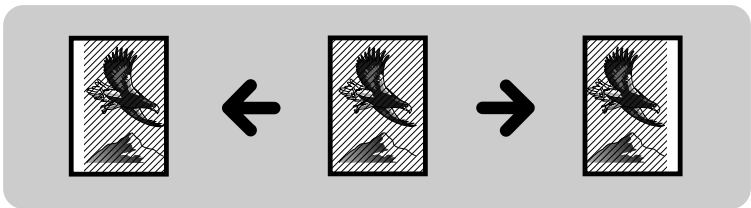
Erasing The Center And The Border (Erase Center/Border)

☛ See page 84.



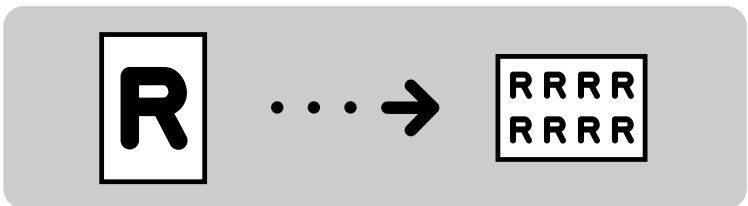
Adjusting The Margin

☛ See page 86.



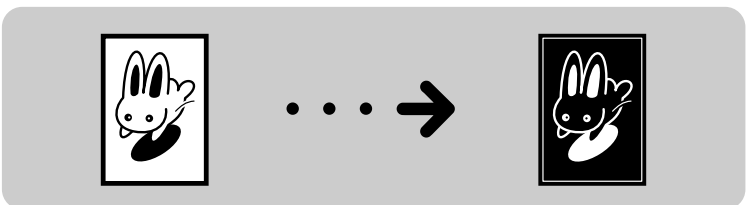
Repeating An Image Over The Entire Copy

☛ See page 87.



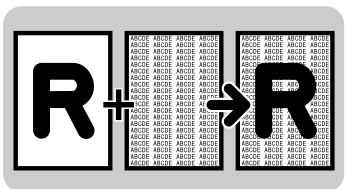
Reversing Black And White

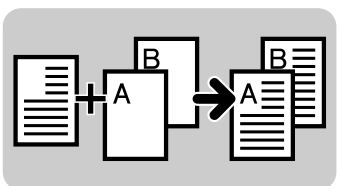
☛ See page 89.



Merging Images

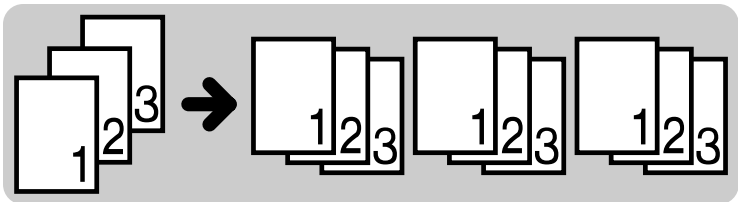
☛ See page 90.



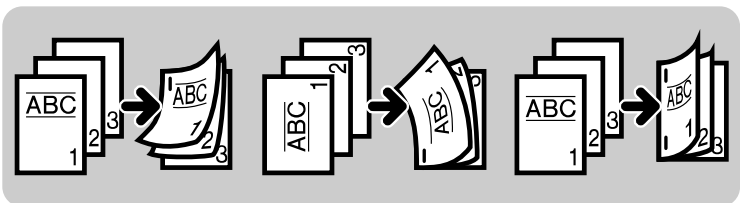


Optional Finishing

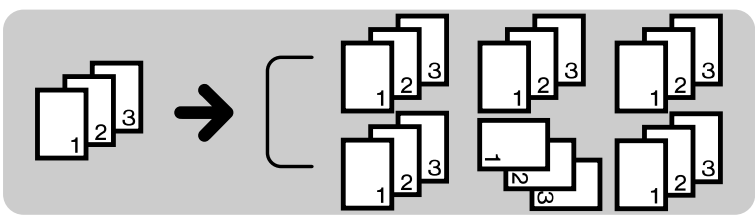
Sorting into sets with optional finisher (123, 123, 123) ☛ See page 92.



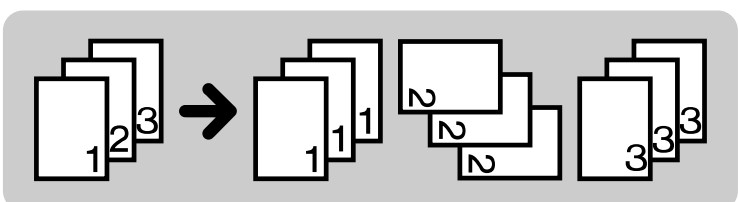
Stapling with optional finisher ☛ See page 95.



Sorting into sets with optional 3-bin sorter (123, 123, 123,) ☛ See page 100.



Stacking together all copies of a page with optional 3-bin sorter (111, 222, 333) ☛ See page 101.



BASICS

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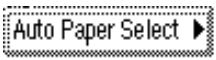
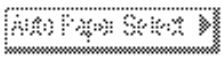
USING THE TOUCH PANEL DISPLAY

On the touch panel display, you can find keys, instructions and messages. By touching keys on the display, you can select or deselect functions and enter data for the selected modes. The display uses the following conventions:



Keys that have the option of being selected.

Keys that have been selected.



Keys that have no option to select.

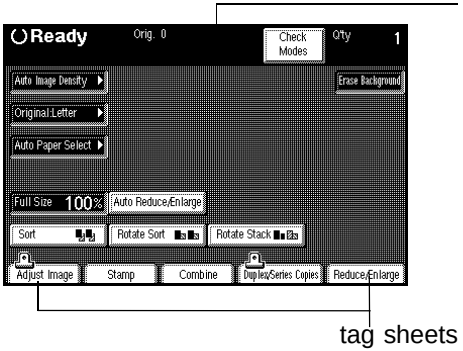
In this manual, we use the following convention:

Key on the display:

In the manual : **[Auto Paper Select]** key

⚠*Caution: Do not press the touch panel display with any hard or sharp object (pen, pencil, etc.). Always use your fingers or something with a soft tip.*

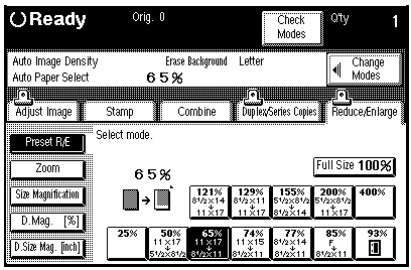
Initial display



Messages and instructions appears here.

tag sheets

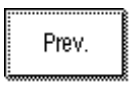
Display after selecting functions on the tag sheets



After selecting functions on tag sheets, the clip appears on the tag.

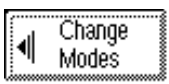
[Check Modes] key

When you have selected functions on tag sheets, this key appears on the upper right area on the touch panel display. Touch this key to see at a glance all the modes you selected.



[Prev.] key

This key appears in the upper right corner of the display when you touch the **[Check Modes]** key. Press to go back to the previous display.



[Change Modes] key

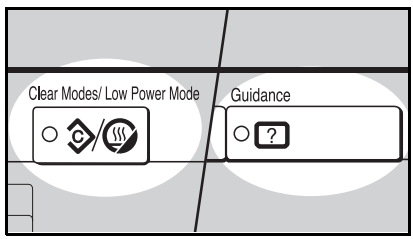
When you select functions on the tag sheets, this key appears on the display. Touch this key to change settings of the following modes:

image density, original type settings, copy paper size, Auto Reduce\Enlarge, and finishing

GETTING HELP ON THE DISPLAY

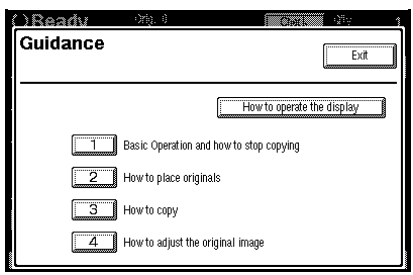
Press the **Guidance** key when you want to know detailed information about functions you use.

1 Press the **Clear Modes/Low Power Mode** key then the **Guidance** key.



2 Touch the key you want to know about on the touch panel display.

For example, if you want to know about "How to operate the display", touch the **[How to operate the display]** key.



- ❒ To go to the next page, touch the **[Next]** key. To return to the previous page, touch the **[Prev.]** key.
- ❒ To go back to the display shown after pressing the **Guidance** key, touch the **[Menu]** key.
- ❒ To exit from the guidance display, touch the **[Exit]** key.

RECOMMENDED & NON-RECOMMENDED ORIGINALS

Recommended Originals

❒ Regarding originals that the optional document feeder can handle, ☛ see "DOCUMENT FEEDER (OPTION)" in the "General Reference".

Non-recommended Originals For The Optional Document Feeder

⚠*CAUTION:* *The following types of originals are not recommended for use with the document feeder. Place them directly on the exposure glass.*

❒ Originals thicker than 128 g/m^2, 34 lb

❒ Originals thicker than 105 g/m^2, 28 lb when using two-sided originals

❒ Originals thinner than 40 g/m^2, 11 lb. But for originals between 40 and 52 g/m^2 (11 and 14 lb), the document feeder must be set to Thin Paper mode. ☛ See "USER TOOLS (ADF:Thin Paper Mode)" in the "General Reference".

❒ Originals larger than A3, 11" x 17"

❒ Originals smaller than A5, 5 1/2" x 8 1/2"

❒ Paper with any king of coating (such as carbon) on the back

❒ Folded, curled, creased, or damaged originals

❒ Mailing labels, or perforated originals

❒ OHP transparencies

❒ Translucent paper

❒ Pasted originals

❒ Damp originals

❒ Sticky originals

❒ Wavy originals

❒ Originals that are not made from paper

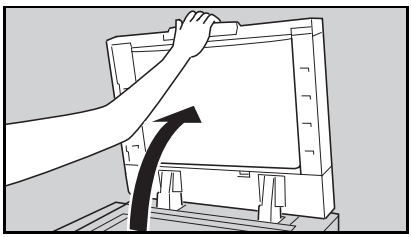
❒ Originals written in pencil on both sides, or two-sided carbon originals

❒ Thermal fax paper, CRO (camera ready original) or aluminum foil

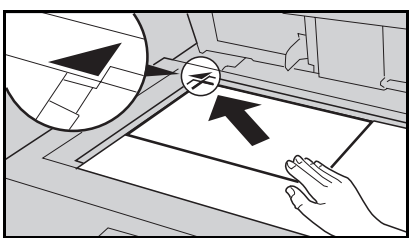
❒ Originals with globs of ink from a ball-point pen

SETTING ORIGINALS ON THE EXPOSURE GLASS

1. Lift the optional platen cover or the optional document feeder.



2. Set the original *face down* on the exposure glass. The original should be aligned to the rear left corner.



3. Lower the optional platen cover or the optional document feeder.

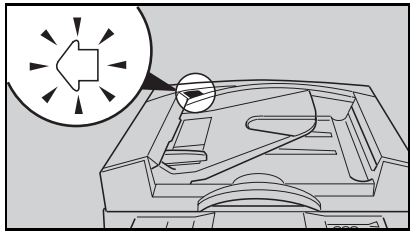
SETTING A STACK OF ORIGINALS IN THE OPTIONAL DOCUMENT FEEDER (ADF)

You can insert a stack of originals (one-sided or two-sided) of the same size into the document feeder. These originals are individually fed onto and removed from the exposure glass.

- ❒ If you want to set originals of different sizes at the same time, use the user tools. ☛ See page 127.

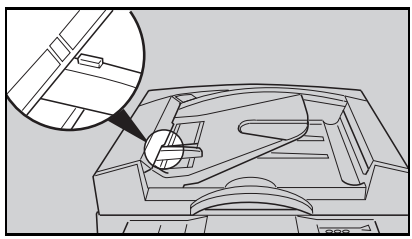
1. Correct any curl, fold, or crease in the originals before setting.

2 Confirm that the **Insert Original** indicator is lit before setting the originals.



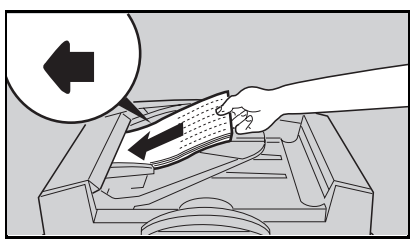
3 Confirm that no previous originals remain on the exposure glass.

4 Adjust the guide to the original size.

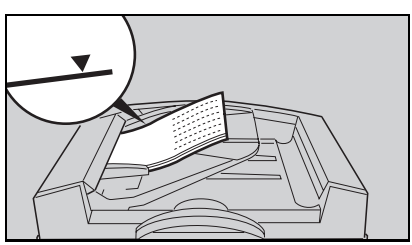


5 Set the originals *face up* into the document feeder until the **Insert Original** indicator goes off.

- ❒ The last page should be on the bottom.
- ❒ The guide must touch the front side of the originals.



- ❒ Do not stack originals above the limit mark.



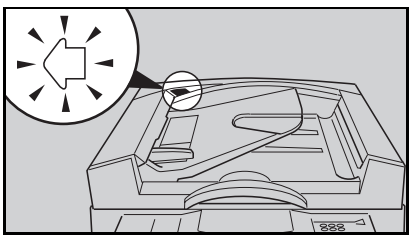
SETTING ONE ORIGINAL AT A TIME IN THE OPTIONAL DOCUMENT FEEDER (SADF)

You can insert one original at a time into the document feeder. The original is automatically fed onto and removed from the exposure glass.

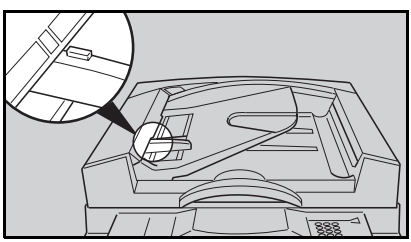
1 Correct any curl, fold, or crease in the originals before setting.

2 Confirm that the **Insert Original** indicator is lit before setting the originals.

3 Confirm that no previous originals remain on the exposure glass.

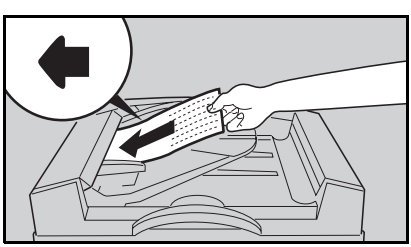


4 Adjust the guide to the original size.



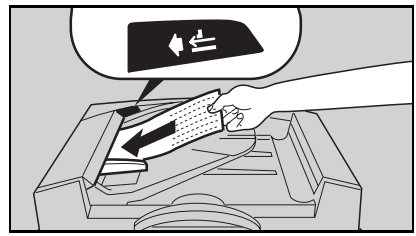
5 Set the original *face up* into the document feeder until the **Insert Original** indicator goes off.

- ❒ If you are copying a stack of originals one sheet at a time and you want to keep them in order, start with the last page of the originals.
- ❒ The original guide must touch the front side of the original.



6 Press the **Start** key.

7 While the **Auto Feed** indicator is lit after an original is fed, set the next original. The original is automatically fed and copied.



❒ If you have set more than two originals, the **Auto Feed** indicator is not lit after the last original is fed. In this case, press the **Start** key again after setting an original.

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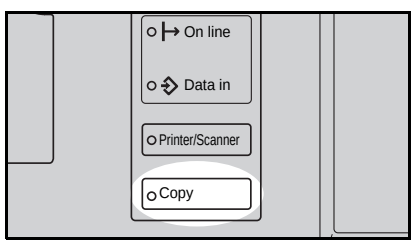
BASIC OPERATIONS

Entering The Copy Mode

If your machine is set to Share or Printer Priority mode, the Copy mode is default after turning on the main switch. If there are no current print or scan jobs, the Copy screen is shown and you can use all copying functions. It is not necessary for you to operate the machine to enter the Copy mode. If your machine is in the Printer or Scanner mode, do the following procedure to enter the Copy mode.

❒ If your machine is set to Printer Only or Scanner Only mode, you cannot use the copying functions. Regarding detailed information, ☛ see "SWITCHING BETWEEN THE PRINTER, COPIER AND SCANNER FUNCTIONS" of the "General Reference."

1 Press the **Copy** key to enter the Copy mode.



One-to-one Copying (Full Size Copying)

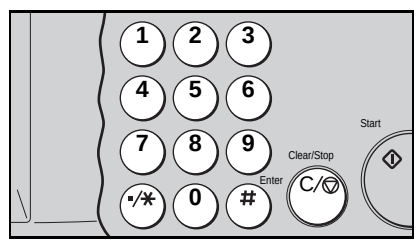
You can make copies that are the same size as your originals.

❒ Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change these settings, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change the default settings with the user tools. ☛ See pages 117 and 119.

1 Set your original on the exposure glass or in the optional document feeder. ☛ See pages 28 ~ 31.

2 Enter the number of copies required using the **Number** keys.

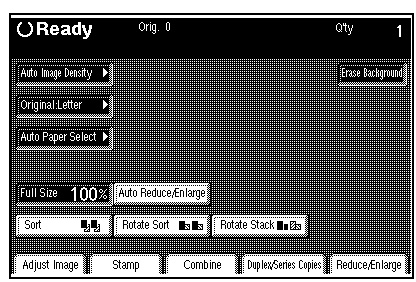
❒ To change the number entered, press the **Clear/Stop** key, then enter the new number.



3 Confirm that the **[Auto Paper Select]** key is dark. If not, touch the **[Auto Paper Select]** key, or select the proper paper size using keys on the display.

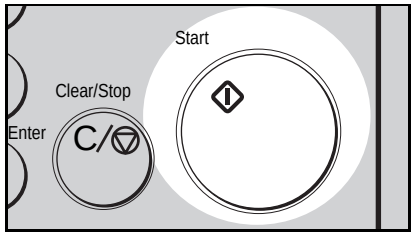
❒ Regarding Auto Paper Select, ☛ see page 38.

❒ Regarding selecting paper size, ☛ see page 37.



4 Make sure that the **[Full Size]** key is dark. If not, touch it.

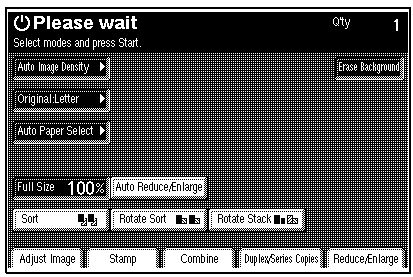
5 Press the **Start** key.



- To stop the copier during the multi-copy run, press the **Clear/Stop** key.
- Press the **Start** key to resume copying, or press the **Clear/Stop** key to clear the entered copy number.

Entering Copy Job Settings During The Warm-up Period (Auto Start)

During the warm-up period (within 140 seconds), the display is as shown. If you enter your copy job settings and press the **Start** key during the warm up period, the copier will start copying automatically when the copier reaches the ready condition.

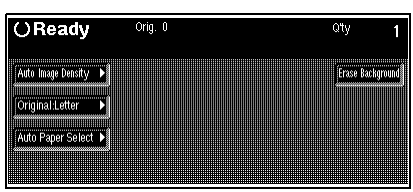


- To cancel Auto Start, press the **Clear/Stop** key.

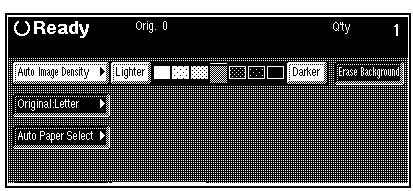
Adjusting Copy Image Density

Auto and manual image density

If the **[Auto Image Density]** key is dark, Auto Image Density is selected. If not, touch the **[Auto Image Density]** key.



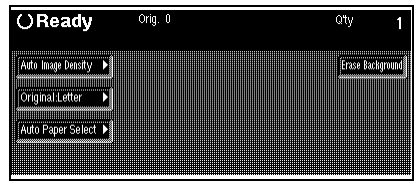
If the **[Auto Image Density]** key is light, Manual Image Density mode is selected. To get a darker image, touch the **[Darker]** key. To get a lighter image, touch the **[Lighter]** key.



Erasing Background (Erase Background)

Use this mode to mask out a dirty background (e.g. with a newspaper) and get clear copies.

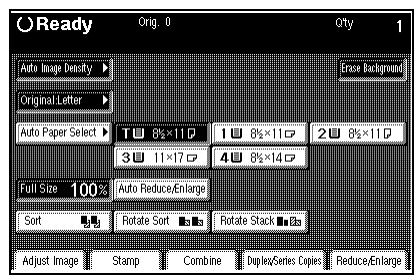
Confirm that the **[Erase Background]** key is dark. If not, touch it.



Selecting The Copy Paper Size (Manual Paper Select)

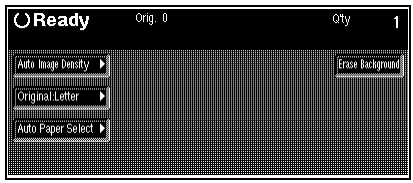
You can select the desired copy paper size manually by touching one of the tray keys in the display.

- ❒ Regarding setting copy paper in the bypass tray, ☛ see page 48.
- ❒ The keys that have an * (asterisk) cannot be used for Auto Paper Select.



Having The Copier Choose The Paper Size(Auto Paper Select)

The copier selects a suitable size of copy paper based on the original size and the reproduction ratio. Make sure that the **[Auto Paper Select]** key is dark. If not, touch the **[Auto Paper Select]** key.



- If you use translucent or transparent originals or originals with tags, the original size might not be detected correctly.
- When placing the original on the exposure glass directly, make sure that the optional platen cover or optional document feeder is lowered before pressing the **Start** key. Otherwise, the original size might not be detected correctly.
- When the original is set at a different direction from the copy paper in the paper tray and the required paper size is A4, 8 1/2" x 11" or smaller, the copier automatically rotates the original image by 90° to match the copy paper direction and make copies.
- The tray keys that have an * (asterisk) cannot be used for the Auto Paper Select.
- Regarding the combination of the Auto Paper Select and Stapling, ☛ see page 96.
- Regarding functions that cannot be used together with this function, ☛ see page 103.
- Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change these settings, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119.

❒ When you use Auto Paper Select, refer to the following table for possible copy paper sizes

Metric version

Original	Possible selected paper sizes for copy
A or B type*	A or B type*
8" x 13"	8" x 13"***, A or B type*
8 1/4" x 13"	8 1/4" x 13"***, A or B type*
8 1/2" x 13"	8 1/2" x 13"***, A or B type*
LT type**, 8" x 10"	LT type**, 8"x 10", A or B type*

* :A type (A3, A4, A5), B type (B4, B5, B6)

** :LT type: 11" x 17", 8 1/2" x 11"

*** :F/F4 size selected by user tools. ☛ See"USER TOOLS" in the"General Reference".

Inch version

Original	Possible selected paper sizes for copy
LT type	LT type
A4	A4, LT type
8" x 13"	8" x 13"**, LT type
8 1/4" x 13"	8 1/4" x 13"**, LT type
8 1/2" x 13"	8 1/2" x 13"**, LT type
11" x 15", 10" x 14", 8" x 10"	11" x 15", 10" x 14", 8" x 10", LT type

* :LT type: 11" x 17", 8 1/2" x 14", 8 1/2" x 11", 5 1/2" x 8 1/2"

** :F/F4 size selected by user tools. ☛ See "USER TOOLS" in the "General Reference".

Having The Copier Choose The Reproduction Ratios (Auto Reduce/Enlarge)

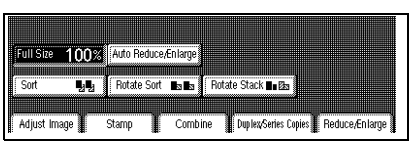
The copier can choose an appropriate reproduction ratio based on the paper and original sizes you select.

- If you use translucent or transparent originals or originals with tags, the original size might not be detected correctly.
- When placing the original on the exposure glass directly, make sure that the optional platen cover or optional document feeder is lowered before pressing the **Start** key. Otherwise, the original size might not be detected correctly.
- When the original is set at the different direction from the selected copy paper, the copier *cannot* rotate the image by 90°. Make sure to set the original in the same direction as the copy paper.
- Regarding functions that cannot be used together with this function, ☛ see page 103.
- Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change these settings, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119.

Example:

Metric version:	Original: A3 ⧉,	Copy paper: A4 ⧉
Inch version:	Original: 11" x 17" ⧉,	Copy paper: 8 1/2" x 11" ⧉

1 Touch the **[Auto/Reduce Enlarge]** key.

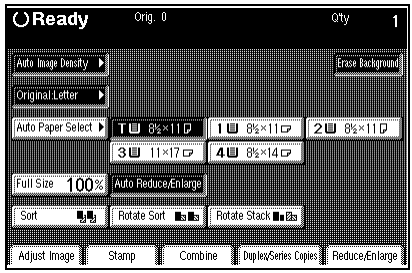


2 Set your original on the exposure glass or in the optional document feeder. ☛ See pages 28 ~ 31.

3 Select the copy size you require:

Metric version:
Touch the **[A4 ▭]** paper tray key.

Inch version:
Touch the **[8 1/2" x 11" ▭]** paper tray key.



4 Press the **Start** key. The original image is reduced to fit the selected copy paper.

Selecting Original Type Setting (Letter, Letter/Photo, Photo, Generation Copy)

There are four types of original type setting. Select the appropriate original type to match the kind of originals you are copying from.

❒ Letter mode is the default. You can change this setting using the user tools.
☛ See page 117.

Letter

Select Letter mode when your originals contain only letters (no picture).

Letter/Photo

Select Letter/Photo when your originals contain photographs or pictures with letters.

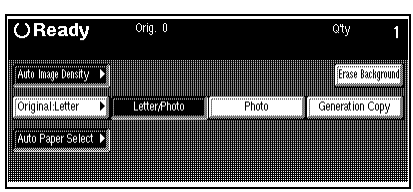
Photo

Delicate tones of photographs and pictures can be reproduced with this mode.

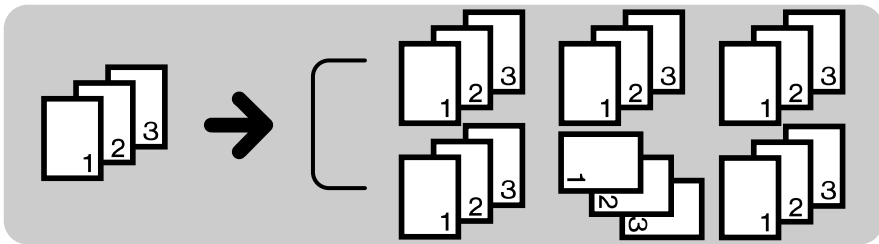
Generation copy

If your originals are copies, so called generation copies, the copy image can be reproduced sharply and clearly.

1 Letter mode is selected by default. Select the desired setting by touching one of four keys.



Sorting Into Sets (123,123,123) (Sort, Rotate Sort)



The copier puts images of more than two originals into memory and copies are collated into sets. In Sort mode, every copy set is delivered on the copy tray. In Rotate Sort mode, every other copy set is rotated by 90º and delivered to the copy tray, so that each set can be easily separated.

Notes for above modes

- ❒ You can make up to 999 copy sets at a time. However, when the number of copies exceeds the capacity of the copy tray, remove copies from the copy tray. Regarding the capacity of the copy tray, ☛ see page 130.
- ❒ After starting copying, the only setting you may change is image density, The change will apply from the next copy. ☛ See page 36.
- ❒ The maximum number of pages that can be stored is as follows:
  A4, 8 1/2" x 11": Approximately 100 pages (images)
- ❒ You can change the settings of these modes with the user tools. ☛ See page 127.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.
- ❒ Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the modes, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119.

Notes for Rotate Sort mode

- ❒ Paper sizes that can be used in Rotate Sort mode are as follows:
  A4, B5, 8 1/2" x 11"
- ❒ Two paper trays that are identical in size and different in direction are required. You can change this setting using the user tools. ☛ See page 127.
- ❒ This mode does not support different size originals.

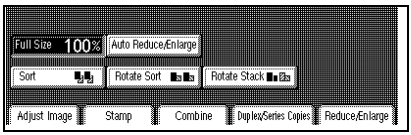
Notes for Sort mode

❒ When you make two-sided copies in Sort mode, the maximum number of copies stacked in the unit for two-sided copies (duplex unit) is as follows:

A3, 11" x 17": 30 sheets
Other sizes: 50 sheets

❒ Different size originals can be used only when you make one-sided copies from one-sided originals.

1 Touch the **[Sort]**, or **[Rotate Sort]** key.



2 Enter the number of copy sets with the **Number** keys.

3 When setting one original at a time

❶ Set an original on the exposure glass or in the optional document feeder (☞ see page 28 or 30). Then press the **Start** key. The copier starts memorizing the original image.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green, or the **Auto Feed** indicator on the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❒ Set the original in the same direction as step ❶.

❒ When the memory reaches 0%, the copier stops memorizing. Press the **Start** key to finish copy jobs which are already into memory. After that, follow the instructions on the display.

❸ Repeat step ❷ until all originals are scanned.

❹ After all originals are put into memory, press the **Enter** key.

❒ If you are making one-sided copies, the first set of copies will have completed.

❺ Press the **Start** key.

3 When setting a stack of originals in the document feeder

❶ Set a stack of the originals in the document feeder (☛ see page 28), then press the **Start** key.

❒ The last page should be on the bottom.

❒ When memory runs out during copying, the machine can be programmed to behave in two ways with the user tools.

♦ Memory Full Auto Scan Restart = **[Yes]**
→ After all images in memory are copied, the machine will re-start scanning automatically.
You should re-order your copies after all copy jobs are finished.

♦ Memory Full Auto Scan Restart = **[No]**
→ The machine will wait for you to press the **Start** key. At this point you should remove your copies from the copy tray. Press the **Start** key and then follow the instructions on the display to continue copying.

If you want to change the setting with the user tools, ☛ see page 127.

❒ If you make one-sided copies, the first set of copies has been completed when all original images are stored in the memory.

Stopping storing images and deleting stored images during copying

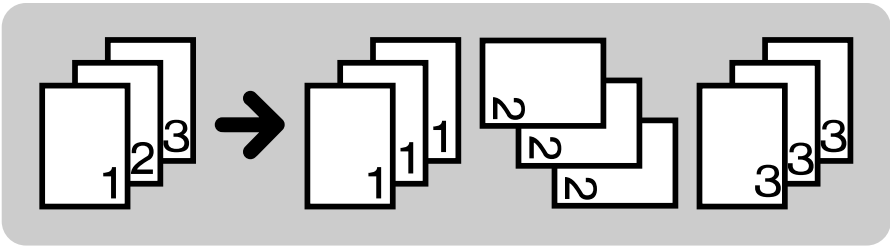
1 Press the **Clear/Stop** key.

❒ The copying run of the 1st set and scanning will stop.

2 Press the **Clear/Stop** key again. If you want to delete stored images, touch the **[Yes]** key following the instructions on the display.

❒ You cannot delete the stored images by press the **Clear/Stop** key, if copies have been stacked in the unit for two-sided copies (duplex unit) when making two-sided copies. In this case, after the step **1**, press the **Clear Modes/Low Power Mode** key. So that, all settings and stored images will be cleared. Then remove copies in the duplex unit by opening the front cover. For position of the duplex unit, ☛ see page 4.

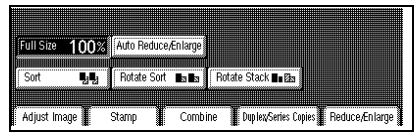
Stacking Together All Copies Of A Page (111,222,333) (Rotate Stack)



Each original is copied together. Every other copies is delivered to the copy tray, turned 90°.

- You can make up to 999 copy sets at a time. However, when the number of copies exceeds the capacity of the copy tray, remove copies from the copy tray. Regarding the capacity of the copy tray, ☛ see page 130.
- These modes do not support different size originals.
- After starting copying, the only setting you may change is image density, The change will apply from the next copy. ☛ See page 36.
- Two paper trays that are identical in size and different in direction are required. You can change this setting with the user tools. ☛ See page 127.
- The paper sizes that can be used in the Rotate Stack mode is as follows:
  A4, B5, 8 1/2" x 11"
- Regarding functions that cannot be used together with this function, ☛ see page 103.
- Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the modes, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119.

1 Touch the **[Rotate Stack]** key.



2 Enter the number of copies with the **Number** keys.

3 **When setting one original at a time**

❶ Set an original on the exposure glass or in the optional document feeder (☞ see page 28 or 30). Then press the **Start** key.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green or the **Auto Feed** indicator on the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❒ Set the original in the same direction as step ❶.

❸ Repeat step ❷ until your copying is finished.

3 **When setting a stack of originals in the document feeder**

❶ Set a stack of the originals in the document feeder (☞ see page 28), then press the **Start** key.

❒ Last page should be on the bottom.

Copying From The Bypass Tray

Use the bypass tray to copy onto OHP transparencies, adhesive labels, translucent paper, post cards, and copy paper that cannot be set in the paper tray.

- Approximately 40 sheets of copy paper (64 g/m2, 17 lb) can be inserted at a time.
- Before making copies onto OHP transparencies, adhesive labels, translucent paper, and post cards, read the notes for them. ☛ See "USE AND STORAGE OF SUPPLIES" in the "General Reference".
- When you make copies using the bypass tray, it is recommended to set paper in the bypass tray lengthwise (▭).
- When using the bypass tray, the large capacity tray cannot be used.
- The following sizes can be used as standard size copy paper. If you use other paper sizes, you should input vertical and horizontal dimensions.

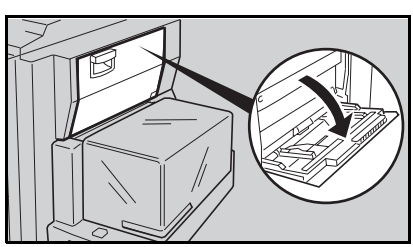
Metric version	Inch version
A3 ▭, B4 ▭, A4 ▯ ▭, B5 ▯ ▭, A5 ▯ ▭, B6 ▯ ▭, A6 ▯ ▭, 11" x 17" ▭	11" x 17" ▭, 8 1/2" x 11" ▯ ▭, 8 1/2" x 14" ▭, 5 1/2" x 8 1/2" ▯ ▭, 8" x 13" ▭,

- Regarding the functions that cannot be used together with this function, ☛ see page 103.
- If your machine is equipped with the optional 3-bin sorter, 5 1/2" x 8 1/2" ▯ cannot be used.
- With the default setting, Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are selected. In this case, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys twice to cancel these modes. You can change this default setting with the user tools. ☛ See pages 117 and 119.

1 Set your original on the exposure glass or in the optional document feeder. ☛ See pages 28 ~ 31.

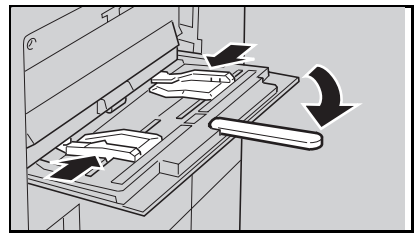
2 Open the bypass tray. The **[Bypass Tray]** key appears on the display.

- If the **[Bypass Tray]** key is not dark, touch it.



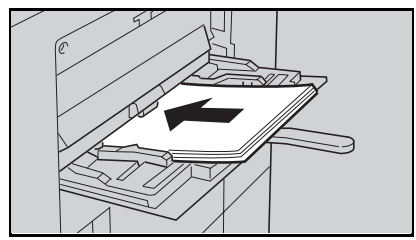
3 When copying onto standard size copy paper

❶ Slide the paper guides to the paper width and, if necessary, swing out the extender to support large size copy paper.



❷ Insert the copy paper into the bypass tray until the beeper sounds.

❒ The beeper can be canceled with the user tools. ☛ See "USER TOOLS" in the "General Reference".



❸ Press the **Start** key.

3 When copying onto non-standard size paper

Acceptable non-standard paper sizes:

Metric version:

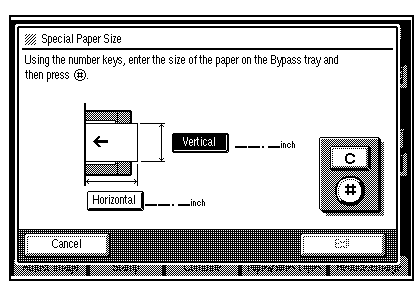
Vertical:	100 ~ 297 mm (in 1 mm steps)
Horizontal:	148 ~ 432 mm (in 1 mm steps)

Inch version:

Vertical:	4.0" ~ 11.7" (in 0.1" steps)
Horizontal:	6.0" ~ 17.0" (in 0.1" steps)

❶ Press the **Enter** key.

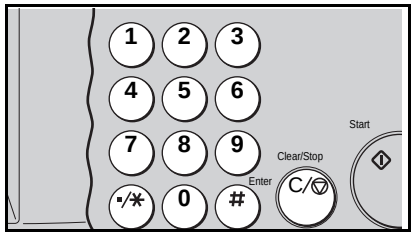
❷ The display changes as shown.



❸ Enter the vertical size of the paper using the **Number** keys.

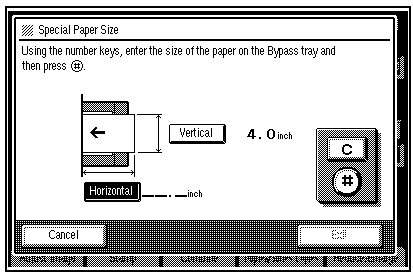
❒ To change the number entered, touch the **[C]** key or press the **Clear/Stop** key.

❹ Touch the **[#]** key in the display or press the **Enter** key.



❺ Enter the horizontal size of the paper using the **Number** keys. Then, touch the **[#]** key in the display or press the **Enter** key.

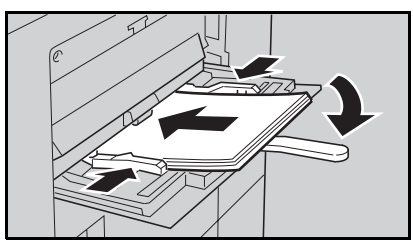
❻ Touch the **[Exit]** key to close this menu.



❼ The **[Bypass Tray]** key changes to **[Special Paper Size]** key.

❽ Adjust the guides to copy paper size and insert the copy paper until the beeper sounds.

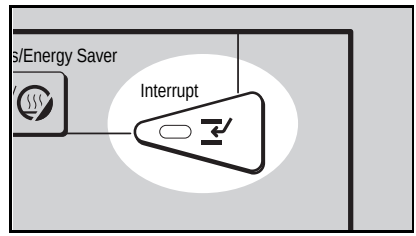
❒ The beeper can be canceled with user tools. ☛ See "USER TOOLS" in the "General Reference".



❾ Press the **Start** key.

Temporarily Stopping One Job To Copy Something Else (Interrupt)

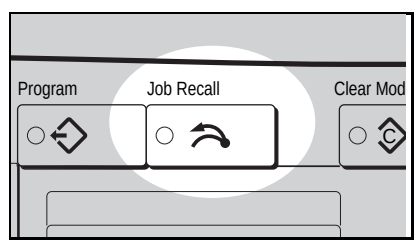
You can make urgently needed copies during a multicopy run by pressing the **Interrupt** key. The interrupted copy job settings are stored in the machine's memory. After interrupt copying is completed, press this key again to recall the previous copy job settings.



- In Interrupt mode, is displayed on the display.
- If you use this function with the optional document feeder, you might have to reset originals not to be copied after interrupt copying is finished. Follow the instructions on the display.
- If the optional 3-bin sorter is equipped with your machine, copies will be delivered to 3rd bin.
- Regarding the functions that cannot be used together with this function, see page 103.

Recalling Job Settings (Job Recall)

The previous copy job settings before auto reset or Low Power mode can be recalled by pressing the **Job Recall** key. When the previous copy job setting is saved, the **Job Recall** indicator is lit.



Storing Your Copy Setting In Memory (Program)

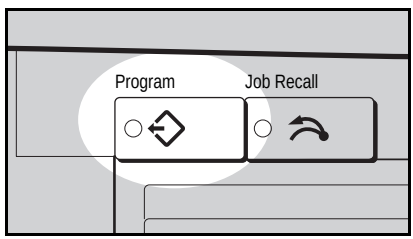
Your ten frequent copying jobs can be stored in the machine's memory.

❒ The stored program cannot be deleted. If you want to change the stored program, overwrite the stored program.

Storing your settings

1 Set the copy settings you want to put into memory.

2 Press the **Program** key.

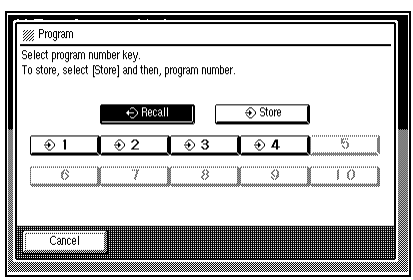


❒ If you want to cancel storing, touch the **[Cancel]** key.

3 Touch the **[Store]** key.

4 Touch one of the **[1]** ~ **[10]** keys that you want to store your settings in.

❒ A key with ◈ has already settings in it. If you want to overwrite settings, touch the key with ◈ and follow the instructions on the display.



Recalling a program

1 Press the **Program** key.

2 Make sure that the **[Recall]** key is dark. If not, touch it.

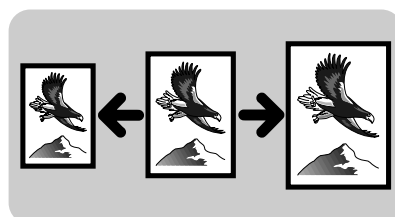
3 Touch one of the **[1]** ~ **[10]** keys that has ◈ on it.

REDUCING AND ENLARGING (Reduce/Enlarge)

- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.
- ❒ Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the modes, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119.

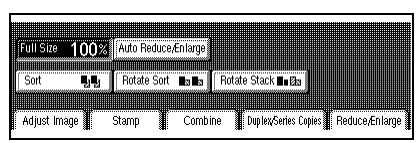
Reducing And Enlarging Using Preset Ratios (Preset R/E)

You can select one of 12 preset ratios (5 enlargement ratios, 7 reduction ratios).



- ❒ You can add 2 fixed preset ratios using the user tools. ☛ See page 118.

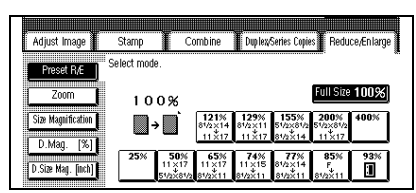
1 Touch the **[Reduce/Enlarge]** key.



2 Confirm that the **[Preset R/E]** key is dark. If not, touch the **[Preset R/E]** key.

3 Touch the desired reproduction ratio.

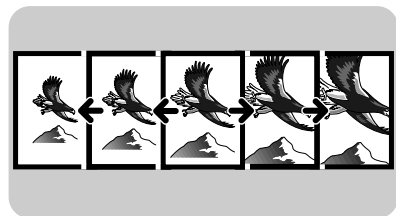
- ❒ Refer to the copy and paper sizes on keys to select the appropriate ratio to match your originals and copy paper.



Reducing And Enlarging In 1% Steps

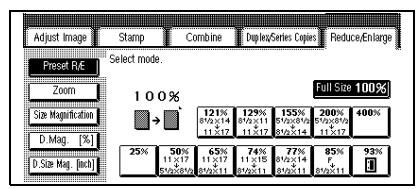
Using the (+) and (-) keys or Number keys (Zoom)

The reproduction ratio can be changed from 25% to 400% in 1% steps. There are two ways to change ratios.



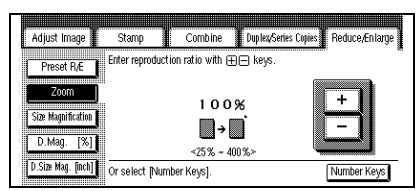
1 Touch the **[Reduce/Enlarge]** key.

2 Touch the **[Zoom]** key.



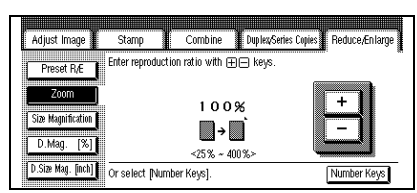
3 **When using the (+) and (-) keys**

❶ Enter the desired reproduction ratios touching the **[+]** and **[-]** keys on the display.



3 **When using number keys**

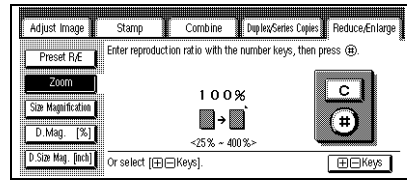
❶ Touch the **[Number Keys]** key.



❷ Enter the desired ratio using the **Number** keys.

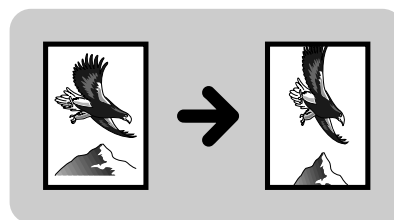
❒ To change the number entered, touch the **[C]** key or press the **Clear/Stop** key, then enter the new number.

❸ Touch **[#]** key on the display or press the **Enter** key.



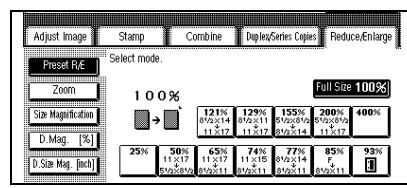
Stretching and squeezing the image (Directional Magnification)

Copies can be reduced or enlarged at different reproduction ratios horizontally and vertically. There are two ways to change ratios.



1 Touch the **[Reduce/Enlarge]** key.

2 Touch the **[D. Mag. (%)]** key.



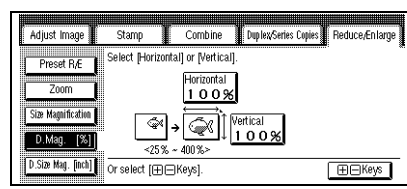
3 **When using number keys**

❶ Touch the **[Horizontal]** or **[Vertical]** key that you want to change the ratio.

❷ Enter the desired ratio using the **Number** keys.

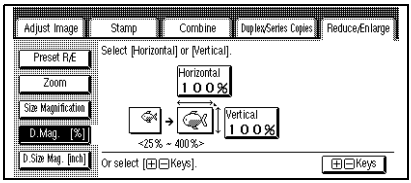
❒ To change the entered ratios, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new ratios.

❸ Touch the **[#]** key or press the **Enter** key.

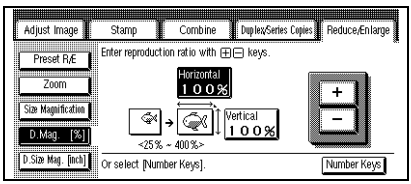


3 When using (+) and (-) keys

❶ Touch the **[+- Keys]** key.



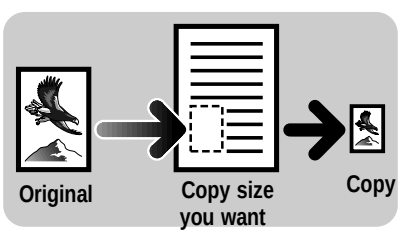
❷ Touch the **[Horizontal]** or **[Vertical]** key that you want to change the ratio. Select the desired ratios using **[+]** and **[-]** keys.



Fitting The Original To A Copy Of A Different Size

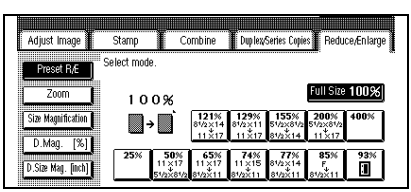
Fitting the image in the copy area as it is (Size Magnification)

The suitable reproduction ratio will be automatically selected when you enter the lengths of the original and copy image you want.

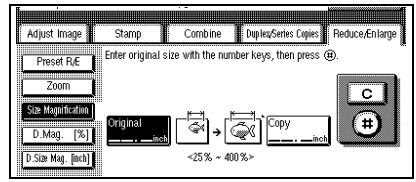


1 Touch the **[Reduce/Enlarge]** key.

2 Touch the **[Size Magnification]** key.



3 Enter the original size with the **Number** keys.



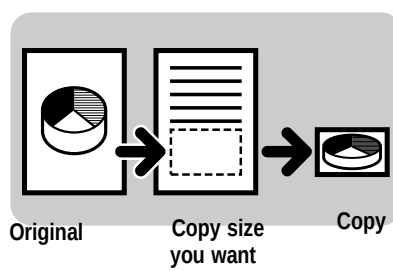
❒ To change the entered size, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new size.

4 Touch the **[#]** key or press the **Enter** key.

5 Enter the copy size by the **Number** keys. Touch the **[#]** key or press the **Enter** key.

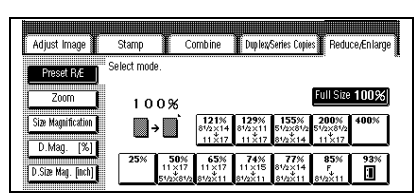
Stretching and squeezing the image into the copy area (Directional Size Magnification)

Copies can be reduced or enlarged to match independent horizontal and vertical size settings.

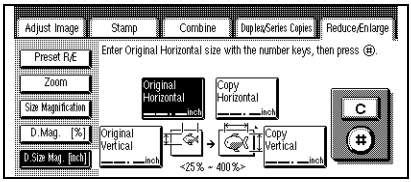


1 Touch the **[Reduce/Enlarge]** key.

2 Touch the **[D. Size Mag. (inch)]** key.



3 Enter the original horizontal size by the **Number** keys.



❒ To change the entered size, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new size.

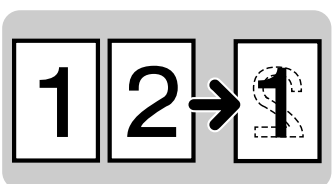
4 Touch the **[#]** key or press the **Enter** key.

5 Repeat steps **3** and **4** to enter the other sizes, following the display instructions.

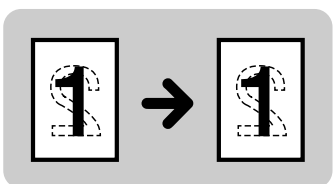
WORKING WITH BOTH SIDES OF ORIGINALS AND COPIES (Duplex/Series Copies)

Making Two-sided Copies (Duplex)

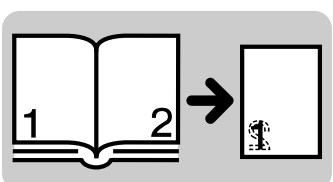
From one-sided originals (1 Sided → 2 Sided)



From two-sided originals (2 Sided → 2 Sided)

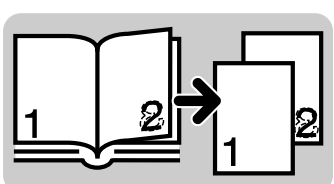


From book originals (Single)



This mode makes two-sided copies from two facing pages of a bound (book) original.

From book originals (Multi)



This mode makes the copies face each other exactly as the bound (book) originals do.

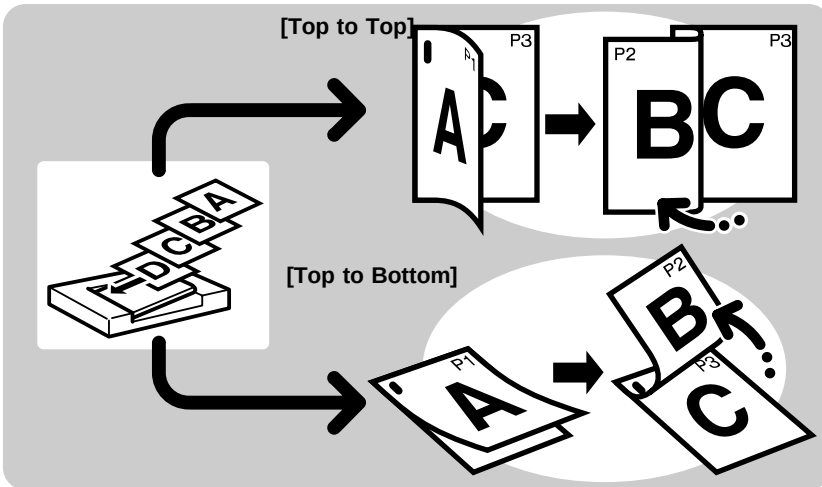
- When you make two-sided copies from one-sided originals, a right margin of 5 mm (0.2") is automatically set on the back side. You can change this setting with the user tools. ☛ See pages 118 and 119.
- You can change a setting of this mode with the user tools. ☛ See page 126.
- Single and Multi modes do not support different size originals.
- Regarding functions that cannot be used together with this function, ☛ see page 103.
- The following paper limitations apply:

Metric version:	Maximum size:	A3 ▭
	Minimum size:	A5 ▯
	Weight:	64 ~ 105 g/m^2
Inch version:	Maximum size:	11" x 17" ▭
	Minimum size:	5 1/2" x 8 1/2" ▯
	Weight:	17 ~ 24 lb

- Maximum number of copies (not in Sort, Rotate Sort, or Staple mode):

Metric version:	50 sheets
	30 sheets (A3, 81 ~ 105 g/m^2)
Inch version:	50 sheets
	30 sheets (11" x 17", 22 ~ 24 lb)

- If you select Stapling (**[Top]**) and Page Numbering (**[P1, P2...]** or **[1/5, 2/5...]**) together when making two-sided copies, it is recommended to set Duplex and Page Numbering modes as described below to avoid page numbers and staple position overlap on the reverse side of copies.
  1. At first, set the Duplex mode as you want.
  2. Touch the **[Stamp]** key.
  3. Touch the **[Page Numbering]** key and select **[P1,P2...]** or **[1/5,2/5...]**. ☛ See pages 78 ~ 82.
  4. If you select **[Top to Top]** in step 1, it is recommended that the **[Shift Position]** key is selected (dark). If you select **[Top to Bottom]** in step 1, it is recommended that the **[Shift Position]** key is not selected.

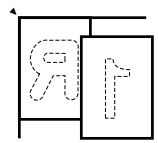
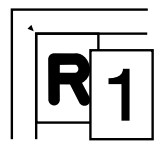
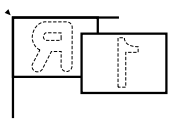
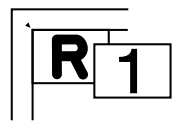
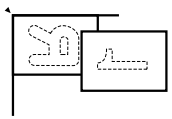
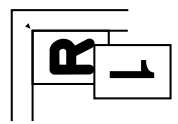
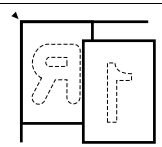
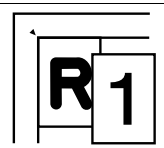
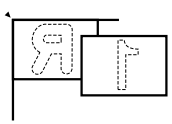
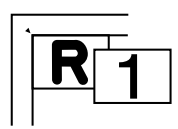
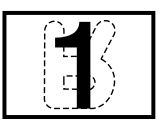
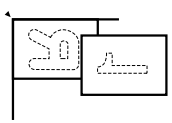
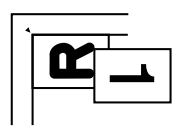
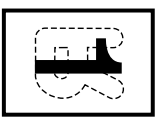


❒ Notes for **[1 Sided → 2 Sided]**
With the default setting, Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are selected. If this setting is acceptable, you don't need to do steps 1, 2, 3 (❶, ❷, ❸, and ❹) on page 62. If you want to change setting, touch the **[Duplex/Series Copies]** key.
If you want to change margin setting, touch the **[Adjust Image]** key. You can change this default setting with the user tools. ☛ See page 119.

❒ Notes for **[2 Sided → 2 Sided]**, **[Single]**, and **[Multi]**
With the default setting, Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are selected. In this case, do steps 1, 2, and 3 (❶) to change the setting. You can change this default setting with the user tools. ☛ See page 117.
If you want to change margin setting, touch the **[Adjust Image]** key. You can change this default setting with the user tools. ☛ See page 119.

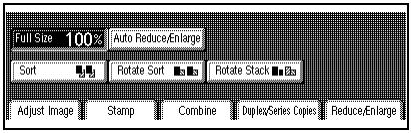
Originals and copies directions when making two-sided copies from one-sided originals

When making two-sided copies from one-sided originals, you can select the orientation (**[Top to Top]**, **[Top to Bottom]**). Referring to the illustration below, select one of them.

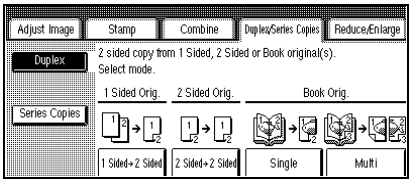
Stapling position	Original setting			Copies
		on the exposure glass	in the document feeder	
[Top to Top]	direction			
	direction			
	direction*			
[Top to Bottom]	direction			
	direction*			
	direction*			

❒ * recommended when your original is larger than B4, 8 1/2" x 14" or larger.

1 Touch the **[Duplex/Series Copies]** key.

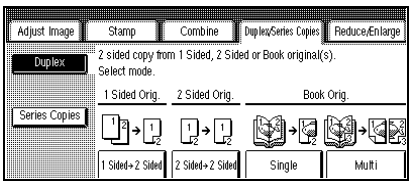


2 Confirm that the **[Duplex]** key is dark. If not, touch the **[Duplex]** key.



3 When you want to make two-sided copies from one-sided originals

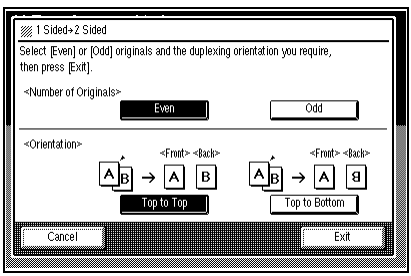
❶ Touch the **[1 Sided → 2 Sided]** key.



❷ Select **[Even]** or **[Odd]** for the number of originals.

❸ Select **[Top to Top]** or **[Top to Bottom]** for the orientation referring to the table on page 57.

❹ Touch the **[Exit]** key.

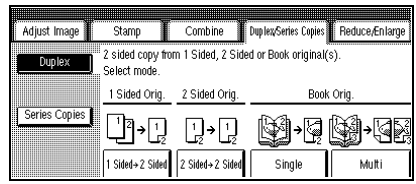


❺ Set your originals (☛ see pages 28 ~ 31) and make your copies.

- ❒ If you set originals in the optional document feeder, the last page should be on the bottom.
- ❒ If you set one original in the optional document feeder at a time, start with the last page to be copied. Follow the procedures on pages 30 ~ 31.
- ❒ If you place originals on the exposure glass, start with the last page to be copied. After setting your original, press the **Enter** or **Start** key following the instructions on the display.

3 When you make two-sided copies from two-sided originals

❶ Touch the **[2 Sided → 2 Sided]** key.

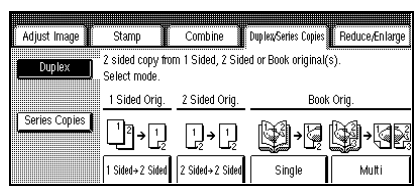


❷ Set your originals (☛ see pages 28 ~ 31) and make your copies.

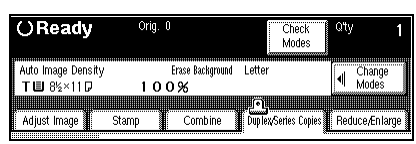
- ❒ If you set originals in the optional document feeder, the last page should be on the bottom.
- ❒ If you set one original in the optional document feeder at a time, start with the last page to be copied. Follow the procedures on pages 30 ~ 31.
- ❒ If you place originals on the exposure glass, start with the last page to be copied. After setting your original, press the **Enter** or **Start** key following the instructions on the display.

3 When you make two-sided copies from book originals (Single, Multi)

❶ Touch the **[Single]** or **[Multi]** key.



❷ Touch the **[Change Modes]** key and select the copy paper size, because Auto Paper Select is canceled.

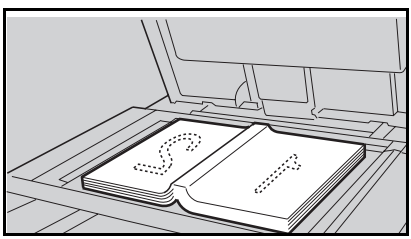


❸ Confirm that the reproduction ratio is appropriate. If not, select the proper ratio by touching the **[Reduce/Enlarge]** key referring to the following table.

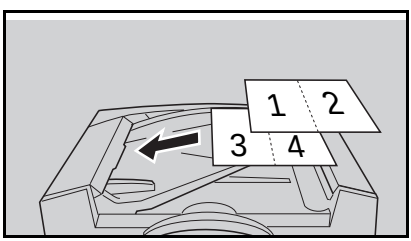
Book original size	Copy paper	Ratio
A3 ▭	A4 ▯	100%
A4 ▭	A4 ▯	141%
11" x 17" ▭	8 1/2" x 11" ▯	100%
8 1/2" x 11" ▭	8 1/2" x 11" ▯	129%

❹ Set your originals. Start with the last page of your book original and work your way to the beginning.

Place the original *face down* on the exposure glass and align the last page with the left scale.



Or, set the facing original in the optional document feeder as shown in the illustration.



❒ If you set originals in the optional document feeder, the last page should be on the bottom.

❒ If you place your original on the exposure glass, or set one original at a time in the document feeder, start with the last page to be copied.

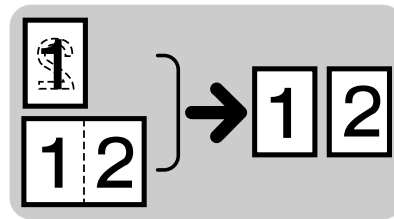
❺ Make your copies by pressing the **Start** key.

❒ If you select the **[Multi]** in step ❶ and set your original on the exposure glass, repeat steps ❹ and ❺ until all originals are finished. To finish your job, press the **Enter** key following the instructions on the display.

❒ If you select the **[Multi]** in step ❶ and set one original at a time in the document feeder in step ❹, press the **Enter** key to finish your job following the instructions on the display.

Making One-sided Copies (Series Copies)

You can make one-sided copies from two facing pages of bound (book) originals and from two-sided originals.

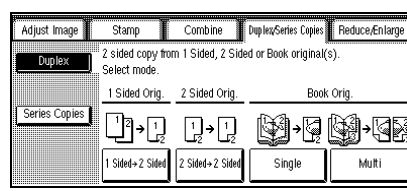


Note: The optional document feeder is required when you select one-sided copies from two-sided originals.

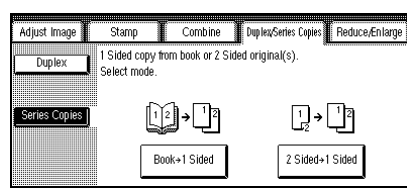
- When making one-sided copies from book originals, the maximum paper size (▯ only) that can be used is as follows:
  Metric version: A4 ▯
  Inch version: 8 1/2" x 11" ▯
- Book → 1 Sided mode does not support different size originals.
- Regarding functions that cannot be used together with this function, ☛ see page 103.
- With the default setting, Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are selected. In this case, do steps **1**, **2**, and **3** to cancel the Duplex setting. You can change this default setting with the user tools. ☛ See page 117.
  If you want to change margin setting, touch the **[Adjust Image]** key. You can change this default setting with the user tools. ☛ See page 119.

1 Touch the **[Duplex/Series Copies]** key.

2 Touch the **[Series Copies]** key.



3 Select the desired mode by touching a key.



4 If you select the **[Book → 1 Sided]** key in step 3, touch the **[Change Modes]** key and select the copy paper size because Auto Paper Select is canceled. Confirm that the reproduction ratio is appropriate. If not, select the proper ratio by touching the **[Reduce/Enlarge]** key. ☛ See the table on page 64.

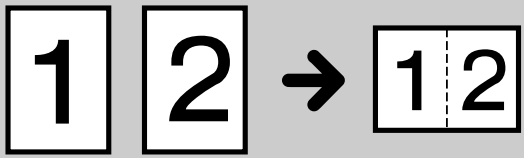
5 Set your originals (☛ see pages 28 ~ 31) and make your copies.

- ❒ If you set originals in the optional document feeder, the last page should be on the bottom. ☛ See the second illustration on page 64.
- ❒ When you set a book original on the exposure glass, start with the last page to be copied aligning it with the left scale. ☛ See the top illustration on page 64.

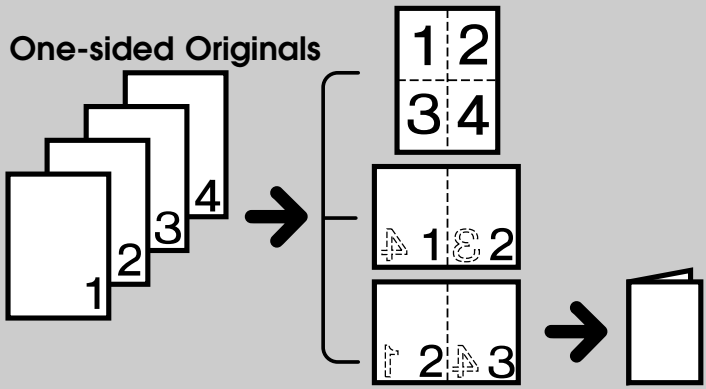
6 Press the **Start** key.

COMBINING ORIGINALS INTO ONE COPY (Combine)

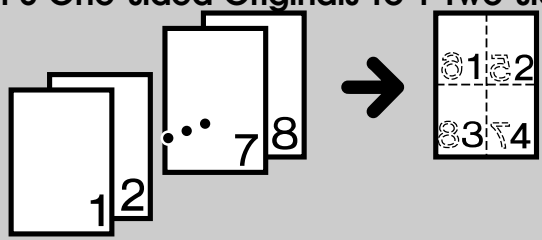
From 2 One-sided Originals To 1 One-sided Copy



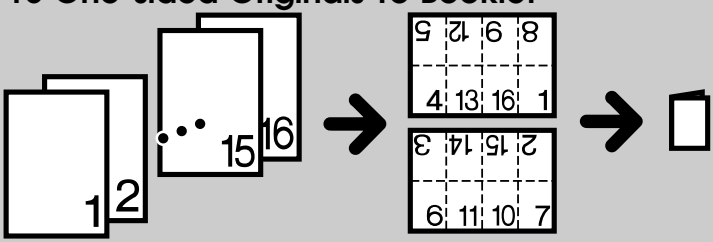
From 4 One-sided Originals



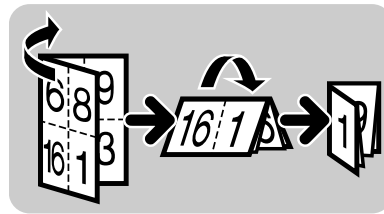
From 8 One-sided Originals To 1 Two-sided Copy



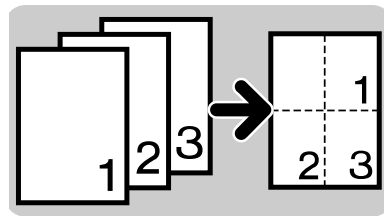
From 16 One-sided Originals To Booklet



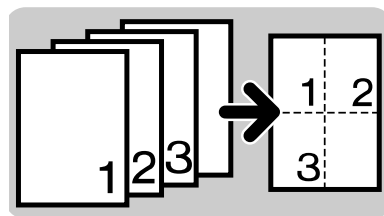
- If you want to make a booklet from 16 originals, fold copies as shown in the illustration.
- If you want to make a booklet that reads from right to left, change the default setting with the user tools. ☛ See page 120.



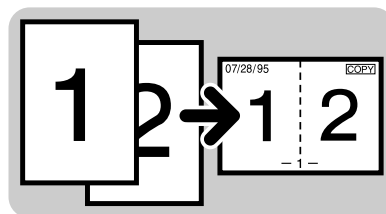
- Even if the number of originals in the optional document feeder is less than the number required in the selected mode, copies can be made as shown in the illustration. You can change this setting with the user tools. ☛ See page 126.



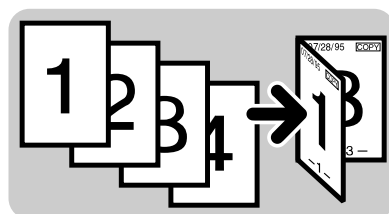
- If you add a blank sheet to the bottom of the stack of your originals, the copies can be made as shown in the illustration.



- Auto Stamping, Date Stamping and Page Numbering will be copied *one per copy paper* as shown in the illustration. This doesn't apply to Booklet mode.

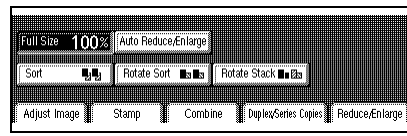


- Auto Stamping, Date Stamping and Page Numbering will be copied *one per original* when you make a booklet from 4 or 16 originals as shown in the illustration.



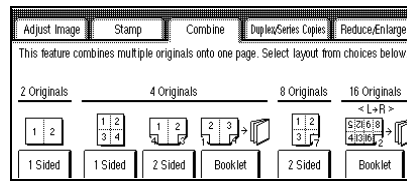
- When you make a booklet from 4 or 16 originals, the maximum paper size that can be used is as follows:
  Metric version: A4
  Inch version: 8 1/2" x 11"
- In this mode, the copier selects the reproduction ratio automatically. This reproduction ratio depends on the original and copy paper sizes as follows:
  Metric version: original: A4, copy paper: A4
  Inch version: original: 8 1/2" x 11", copy paper: 8 1/2" x 11"
- Even if the direction of originals is different from that of copy paper, the copier will automatically rotate the image by 90° to make copies properly.
- The original size is decided when the first original is stored in the memory. So, you cannot use originals containing different sizes and directions together.
- Separation line between originals can be printed using the user tools. ☛ See page 120.
- Regarding functions that cannot be used together with this function, ☛ see page 103.
- With the default setting, Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are selected. In this case, touch the **[Duplex/Series Copies]** key twice to cancel Duplex mode. You can change this default setting with the user tools. ☛ See page 117.
  If you want to change margin setting, touch the **[Adjust Image]** key. You can change this default setting with the user tools. ☛ See page 119.

1 Touch the **[Combine]** key.

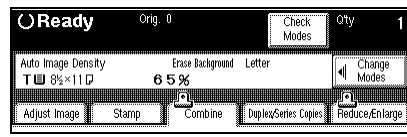


2 Select one of the desired combine modes.

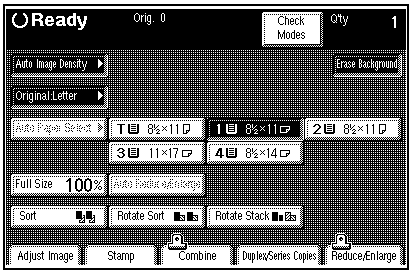
- The suitable reproduction ratio is selected automatically.



3 Touch the **[Change Modes]** key.



4 Select the same size copy paper as the original.



5 When setting one original at a time

❶ Set the original on the exposure glass or in the document feeder (☛ see page 28 or 30). Then press the **Start** key.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green or the **Auto Feed** indicator on the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❸ Repeat step ❷ until all originals are scanned.

❒ If the number of scanned originals is the required number in the selected mode, copying will start automatically.

❹ To finish your copying job, press the **Enter** and **Start** keys following the instructions on the display.

5 When setting a stack of originals in the document feeder

❶ Set a stack of originals (☛ see page 28) in the document feeder and press the **Start** key.

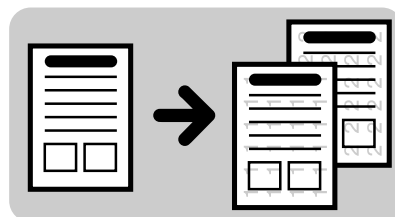
❒ The last page should be on the bottom.

PRINTING ID NUMBERS, PAGE NUMBERS, AND MESSAGES (Stamp)

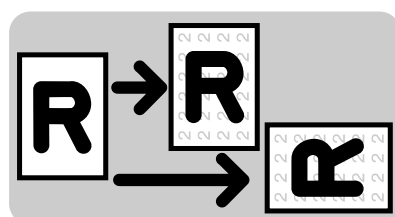
❒ Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the modes, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119.

Printing Numbers On The Background Of Your Copies (Background Numbering)

You can number your copies by printing a number on the background of the copy. This function can help you to keep track of confidential documents.



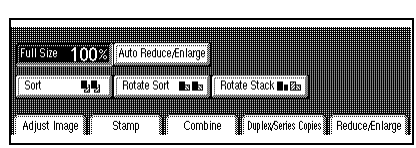
❒ Background Numbering cannot be rotated. For example, if you select Rotate Sort with the Background Numbering, the copies will be as shown in the illustration.



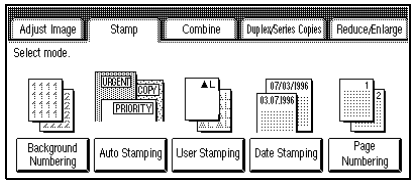
❒ You can change some settings (size, density) of the numbers with the user tools. ☛ See page 126.

❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

1 Touch the **[Stamp]** key.

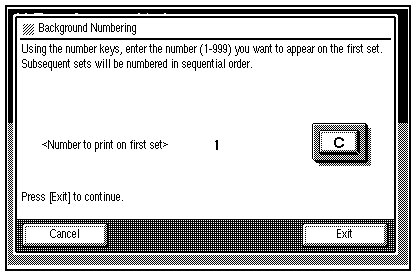


2 Touch the **[Background Numbering]** key.



3 Enter the number you want to print on the first set using the **Number** keys.

❒ To change the entered number, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new number.



4 Touch the **[Exit]** key.

5 Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

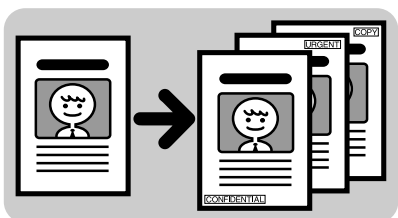
Printing Preset Messages On Your Copies (Auto Stamping) - English Only

NOTE: If your machine is the metric version, this function cannot be used as a default setting. If you want to use this function, contact your sales or service representative.

One of the following seven messages can be stamped on copies.

URGENT, COPY, PRIORITY
PRELIMINARY, CONFIDENTIAL,
For Your Information,
For Internal Use Only

*A frame is printed around the message.



❒ You can change some settings of Auto Stamping (stamping position, size, density) using the user tools. ☛ See pages 122 ~ 123.

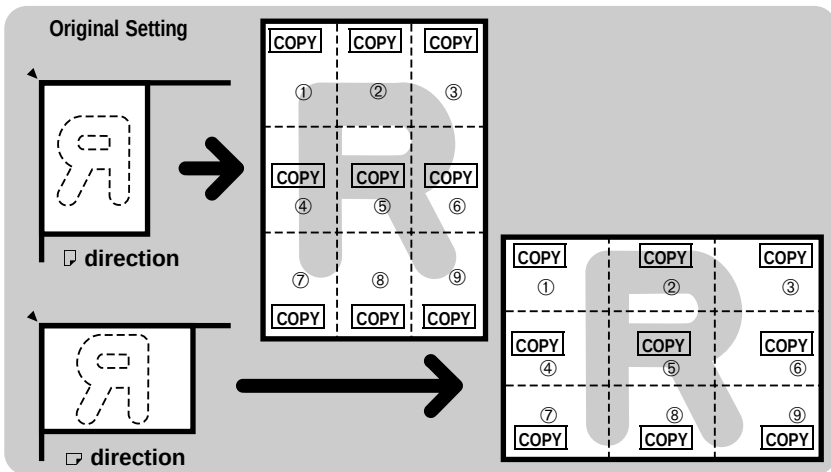
❒ One message can be stamped at a time.

❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

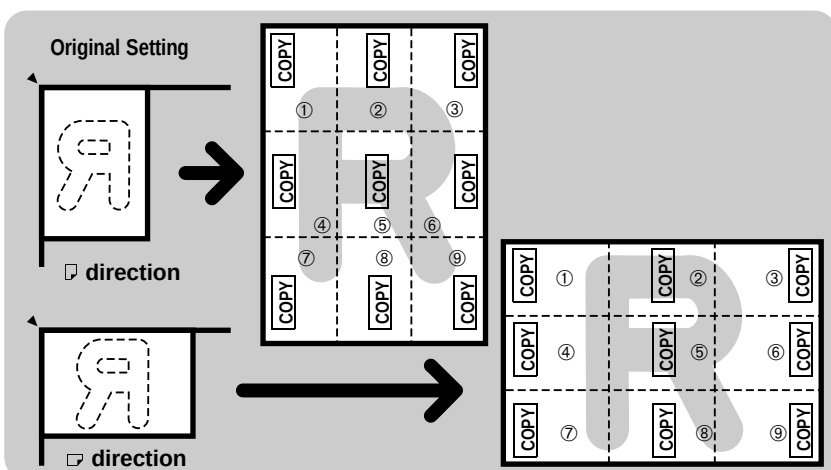
Original setting, stamping position and direction

Key on Display	↖	↑	↗	←	✳	→	↙	↓	↘
Stamping Position	①	②	③	④	⑤	⑥	⑦	⑧	⑨

Direction: Horizontal

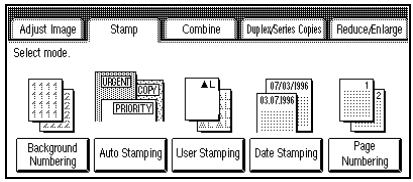


Direction: Vertical

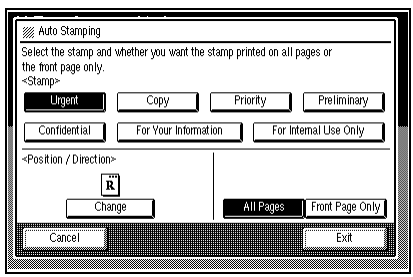


1 Touch the **[Stamp]** key.

2 Touch the **[Auto Stamping]** key.

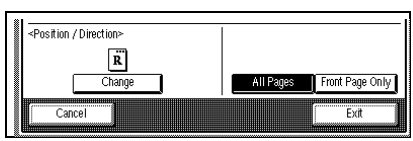


3 Select the desired message by touching a key.

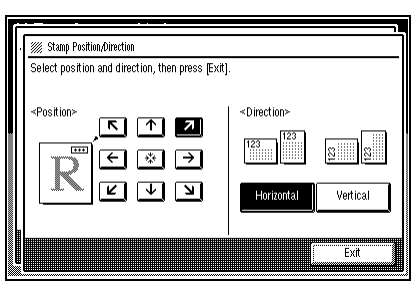


4 If changing the stamping position and direction

❶ Touch the **[Change]** key.

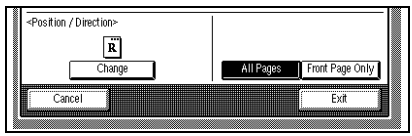


❷ Select the desired position and direction by touching keys. For position and direction, refer to the previous page. Touch the **[Exit]** key.



4 If stamping on the front page only

❶ Touch the **[Front Page Only]** key.

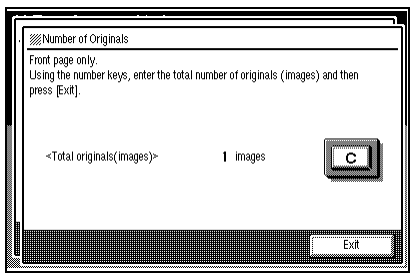


❷ Enter the total number of pages of your originals using the **Number** keys.

❒ Example:
If you have 2 two-sided originals, the number of pages is 4.

❒ When you want to change the entered number, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new number.

❸ Touch the **[Exit]** key.



5 Touch the **[Exit]** key. Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

❒ Start with the last page to be copied.

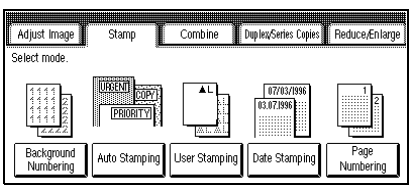
Printing Your Own Messages On Your Copies (User Stamping)

Up to four messages which you use frequently can be stored in the machine's memory. You can make copies with your message stamped.

- ❒ Before using this function, you have to store your messages using the user tools. ☛ See page 128.
- ❒ You can change some settings of User Stamping using the user tools. ☛ See page 124.
- ❒ Regarding original setting, stamping position and stamping direction, ☛ see page 73.
- ❒ One message can be stamped at one time.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

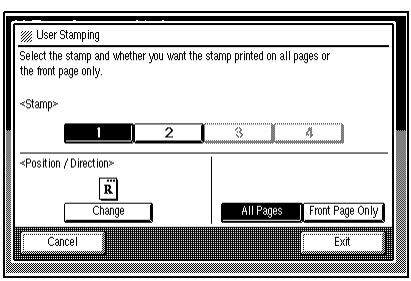
1 Touch the **[Stamp]** key.

2 Touch the **[User Stamping]** key.



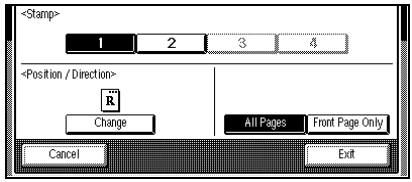
3 Select the desired number where your message is stored by touching a key.

- ❒ Keys with no stored message cannot be selected. In the illustration, user stamps 1 and 2 have been stored.



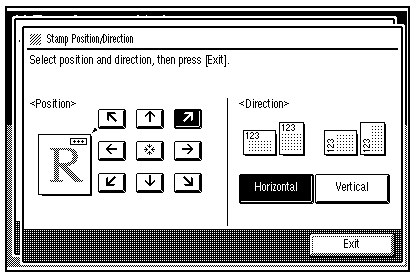
4 If changing the stamping position and direction

❶ Touch the **[Change]** key.



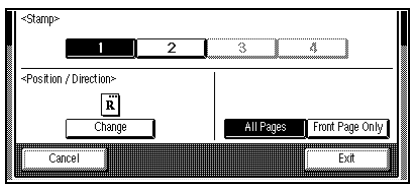
❷ Select the desired position and direction by touching keys. For position and direction, ☛ see page 73.

❸ Touch the **[Exit]** key.



4 If stamping on the front page only

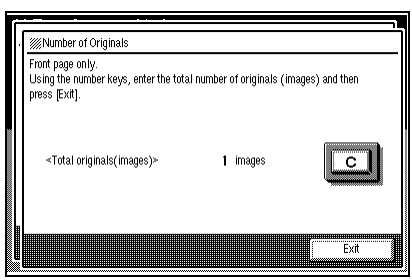
❶ Touch the **[Front Page Only]** key.



❷ Enter the number of your originals using the **Number** keys.

❒ When you want to change the number entered, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new number.

❸ Touch the **[Exit]** key.

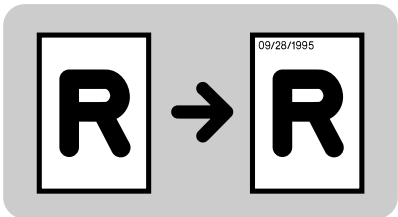


5 Touch the **[Exit]** key.

6 Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

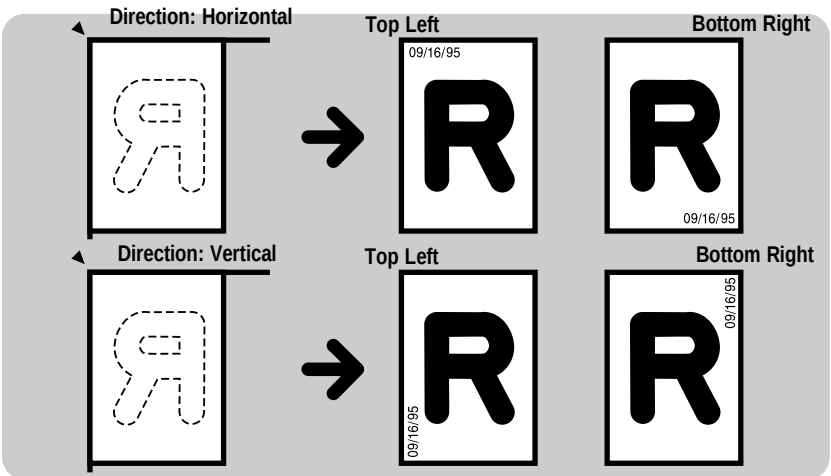
Printing Dates And Page Numbers (Date Stamping, Page Numbering)

Date Stamping



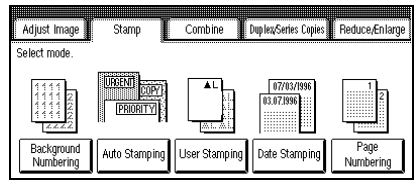
- ❒ You can change the settings of Date Stamping with the user tools. ☛ See page 124 ~ 125.
- ❒ If you select Date Stamping and Page Numbering together, the last stamping direction selected takes priority.
- ❒ Regarding copies in Date Stamping and Combine mode, ☛ see page 68.
- ❒ The size and fonts of Date Stamping cannot be changed.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

Original setting, stamping position and direction

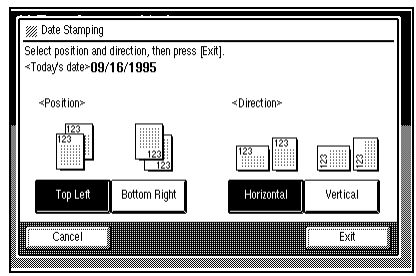


1 Touch the **[Stamp]** key.

2 Touch the **[Date Stamping]** key.



3 Select the desired direction and position of Date Stamping using the keys on the display. Regarding position and direction, ☛ see previous page.

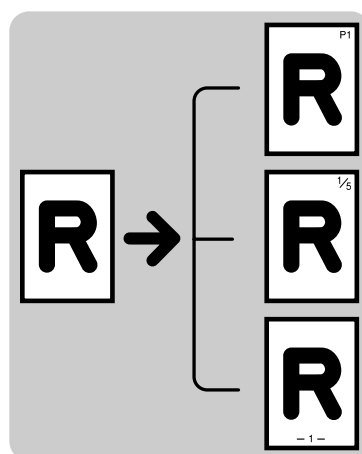


4 Touch the **[Exit]** key.

5 Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

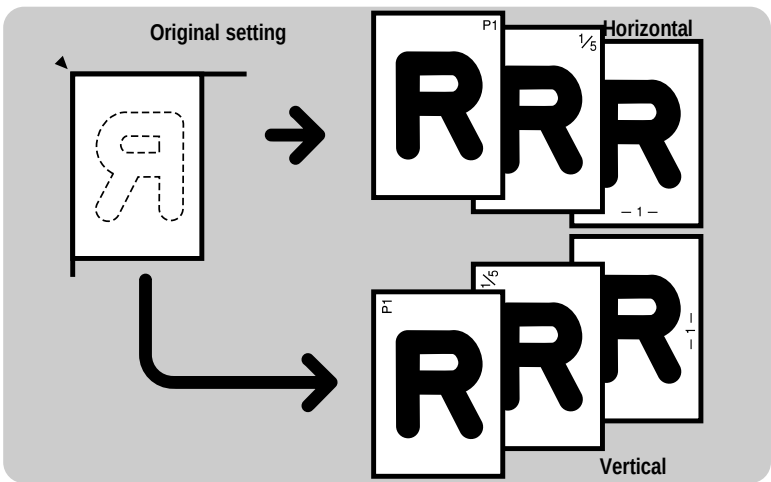
Page Numbering

You can print page numbers on your copy. There are three types of page numbering (P1, P2..., 1/5, 2/5..., or -1-, -2-...)

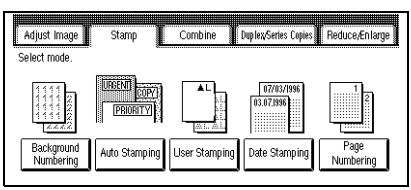


- ❒ You can change the settings of page numbering with the user tools. ☛ See pages 120 ~ 121.
- ❒ If you select Date Stamping and Page Numbering together, the last stamping direction selected takes priority.
- ❒ Regarding copies in Page Numbering and Combine mode, ☛ see page 68.
- ❒ If you select Stapling (**[Top]**) and Page Numbering (**[P1, P2...]** or **[1/5, 2/5...]**) together when making two-sided copies, page numbers and staple position might overlap. To avoid this, do the procedure described on page 59.
- ❒ The size and font of Page Numbering cannot be changed.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

Original setting, stamping position and direction

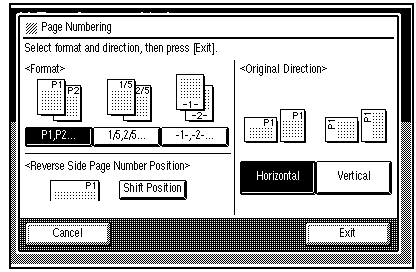


1. Touch the **[Stamp]** key.
2. Touch the **[Page Numbering]** key.



3 Select the desired format and orientation by touching the keys on display. Then, touch the **[Exit]** key.

❒ Regarding the **[Shift Position]** key, ☛ see page 59.

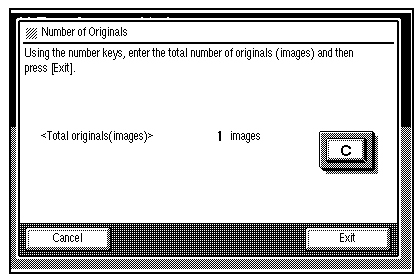


4 If you selected (*P1, P2...*) or (*-1-,-2-...*) in step 3

❶ Enter the total page number of originals using the **Number** keys.

❒ To change the number entered, touch the **[C]** key or press the **Clear/Stop** key, and then enter a new number.

❷ Touch the **[Exit]** key.



☛ **Go to step 5**

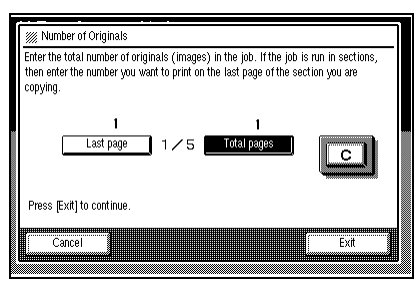
4 If you selected (*1/5,2/5...*) in step 3

❶ Confirm that the **[Total pages]** key is dark. If not, touch it. Enter the total number of originals using the **Number** keys.

❒ To change the number entered, touch the **[C]** key or press the **Clear/Stop** key, and then enter a new number.

❷ Touch the **[Exit]** key.

❒ Regarding **[Last page]** key, ☛ see page 82.


Number of Originals
Enter the total number of originals (images) in the job. If the job is run in sections, then enter the number you want to print on the last page of the section you are copying.
1
1
Last page
1 / 5
Total pages
C
Press [Exit] to continue.
Cancel
Exit

☛ **Go to step 5**

[Last page] key

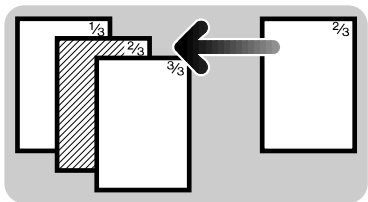
In most cases, it is not necessary to input the data for this key. Use this key for the following conditions:

❒ Example 1: If you want to make an insertion into a completed copy set (in this case 2/3)

❶ Enter "3" for the **[Total pages]** key.

❷ Enter "2" for the **[Last page]** key.

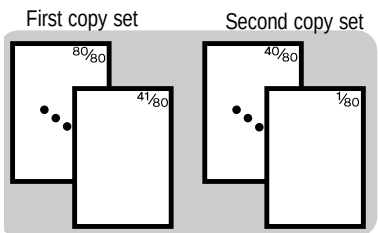
❸ Using the original for 2/3 page, make your copy.



❒ Example 2: If you have 80 originals, and want to make copies using 40 originals at a time.

❶ Set 80 ~ 41 pages of originals. Enter "80" for the **[Total pages]** key, and make your copies.

❷ Set 40 ~ 1 pages of originals. Enter "80" for the **[Total pages]** key. Enter "40" for the **[Last page]** key, and make your copies.



5 When setting one original at a time

❶ Set an original on the exposure glass or in the optional document feeder (☛ see pages 28 or 30). Then, press the **Start** key.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green or the **Auto Feed** indicator of the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❸ Repeat step ❷ until your copying is finished.

5 When setting a stack of originals in the document feeder

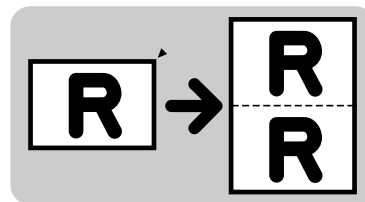
❶ Set a stack of originals in the document feeder (☛ see page 28), then press the **Start** key.

❒ Last page should be on the bottom.

EDITING THE COPY IMAGE (Adjust Image)

Copying The Image Twice On One Page (Double Copies)

The one original image is copied twice on one copy as shown in the illustration. The separation line is copied in broken line.



- You can change the type of separation line or delete it with the user tools. ☛ See page 119.
- Please refer to the following table when you select original and copy paper sizes with 100% ratio:

Metric version:

Original	**Copy paper**
A5 ⊐	A4 ⊏
B6 ⊐	B5 ⊏

Inch version:

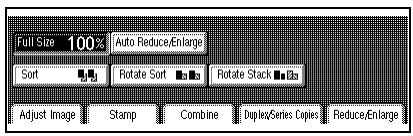
Original	**Copy paper**
5 1/2" x 8 1/2" ⊐	8 1/2" x 11" ⊏

- It is impossible to turn lengthwise (⊐) original images 90° on lengthwise (⊐) copy paper. In this case, select ⊏ copy paper referring to the above table.
- A5 ⊐, B6 ⊐ and 5 1/2" x 8 1/2" ⊐ originals cannot be detected properly on the exposure glass. Make sure to select the copy paper manually or set the originals in the optional document feeder. This setting can be changed by your service representative. ☛ See "SERVICE REPRESENTATIVE SETTINGS" in the "General Reference".
- Regarding functions that cannot be used together with this function, ☛ see page 103.

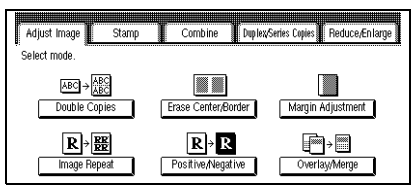
❒ Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the modes, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119.

1 Confirm that the **[Auto Paper Select]** and **[Full Size]** keys are dark.

2 Touch the **[Adjust Image]** key.



3 Touch the **[Double Copies]** key.



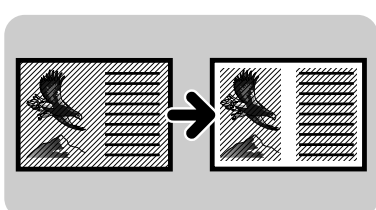
4 Set your originals in the optional document feeder (☛ see page 28).

❒ If your original is A5 ◻, B6 ◻ or 5 1/2" x 8 1/2" ◻ and you do *not* set your originals in the document feeder, select the copy paper manually before making copies by touching the **[Change Modes]** key.

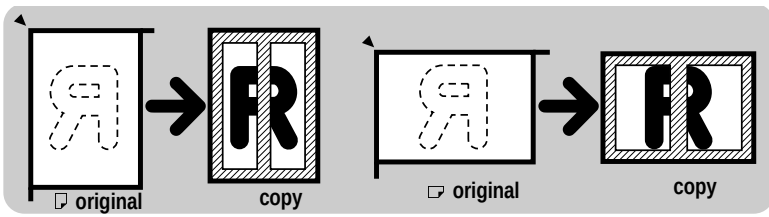
5 Press the **Start** key.

Erasing The Center And The Border (Erase Center/Border)

This function erases the center and/or all four sides of the original image, such as book originals.

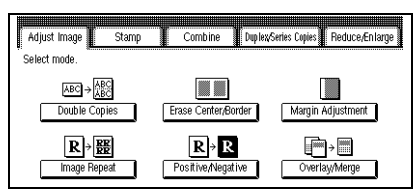


- The default setting of the erased margin is as follows. You can change this setting using the user tools. ☛ See page 119.
  Metric version: 10 mm
  Inch version: 0.4"
- The position of the margin to be erased is determined according to the original size and reproduction ratio. If your original is non-standard size, undesired areas might be erased.

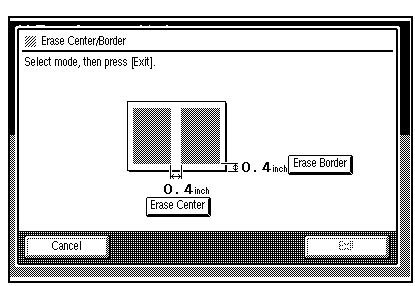


- If you select copy paper manually, make sure to select the same direction as that of your original.
- Regarding functions that cannot be used together with this function, ☛ see page 103.
- Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the modes, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119.

1. Touch the **[Adjust Image]** key.
2. Touch the **[Erase Center/Border]** key.

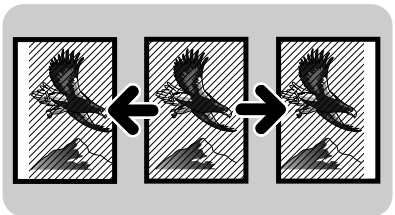


3. Select keys.
4. Touch **[Exit]** key.
5. Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.



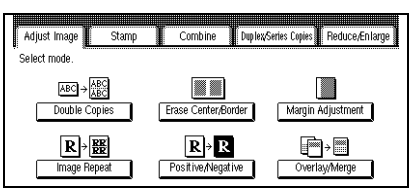
Adjusting The Margin (Margin Adjustment)

You can shift the image either left or right to make a binding margin.



- The margin width default is as follows. You can change this setting using the user tools. ☛ See page 118.
  Metric version: 5 mm
  Inch version: 0.2"
- Margin for two-sided copies (orientation: Top to Top):
  For copies that read from left to right, set the front left and back right margins.
  For copies that read from right to left, set the front right and back left margins.
- When you make two-sided copies from one sided originals, a right margin 5 mm (0.2") is set on the back side automatically as a default setting. You can change this setting using the user tools. ☛ See page 119.
- Regarding functions that cannot be used together with this function, ☛ see page 103.
- Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the Duplex mode setting, touch the **[Duplex/Series Copies]** key. If you want to change the margin setting, touch the **[Adjust Image]** key (step 1). You can change this default setting with the user tools. ☛ See pages 117 and 119.

1. Touch the **[Adjust Image]** key.
2. Touch the **[Margin Adjustment]** key.

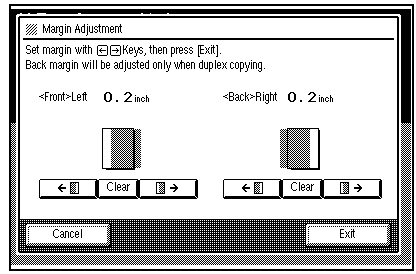


3 Set the margin width by touching the right or left arrow key.

❒ To clear the width entered, touch the **[Clear]** key.

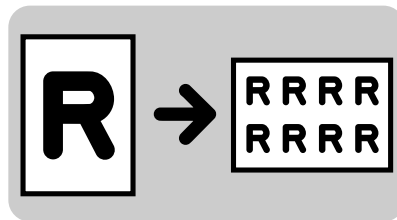
4 Touch the **[Exit]** key.

5 Set your original (☛ see pages 28 ~ 31) and press the **Start** key.



Repeating An Image Over The Entire Copy (Image Repeat)

The original image is copied repeatedly.



❒ The number of repeated images depends on the original size, copy paper size, and reproduction ratio. Refer to the following table.

Metric version:

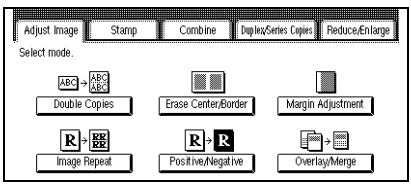
Original size	Copy Paper Size	Reproduction ratio and number of repeat image
A5 ▯	A4 ▯	71% → 4 images
A5 ▭	A4 ▭	35% → 16 images
A5 ▯	A4 ▭	100% → 2 images
A5 ▭	A4 ▯	50% → 8 images 25% → 32 images

Inch version:

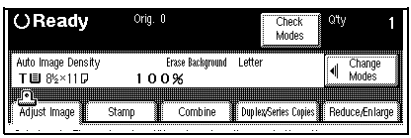
Original size	Copy Paper Size	Reproduction ratio and number of repeat image
5 1/2" x 8 1/2 " ▯	8 1/2" x 11" ▯	65% → 4 images
5 1/2" x 8 1/2" ▭	8 1/2" x 11" ▭	32% → 16 images
5 1/2" x 8 1/2" ▯	8 1/2" x 11" ▭	100% → 2 images
5 1/2" x 8 1/2" ▭	8 1/2" x 11" ▯	50% → 8 images 25% → 32 images

- Separate lines between repeated images can be printed using the user tools. ☛ See page 120.
- Part of a repeated image might not be copied depending on copy paper size, copy paper direction, or reproduction ratio.
- If your original is non-standard size, the copier might not detect the original size correctly. It is recommended to use originals of standard size.
- The copying speed might be slower in this mode.
- Regarding functions that cannot be used together with this function, ☛ see page 103.
- Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the modes, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119.

1. Touch the **[Adjust Image]** key.
2. Touch the **[Image Repeat]** key.



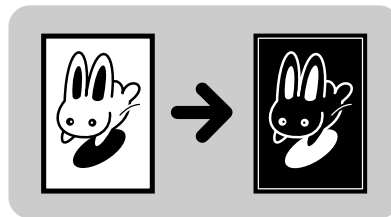
3. Touch the **[Change Modes]** key.



4. Select the copy paper size by touching a key referring to the table on the previous page.
5. Select the reproduction ratio by touching the **[Reduce/Enlarge]** key referring to the table on the previous page.
6. Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

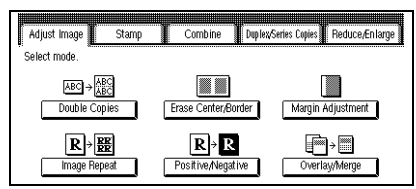
Reversing Black and White (Positive/Negative)

Black and white images of the original are reversed.



- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.
- ❒ Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the modes, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119.

1. Touch the **[Adjust Image]** key.
2. Touch the **[Positive/Negative]** key.

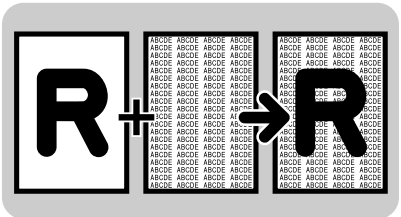


3. Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

Merging Images (Overlay/Merge)

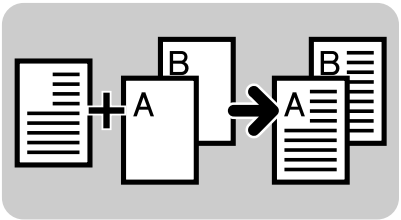
Making 1 image from 2 (Overlay)

Two different originals can be merged onto the same copy paper.



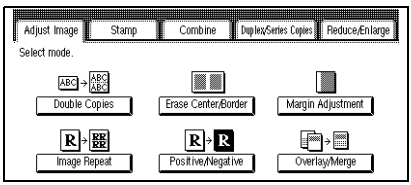
Merging a template into several copies (Copy Merge)

The image of the original which is copied *first* will be a background image (master) on all copies. Then, the *remaining* originals which follow the first one will be copied with the background.



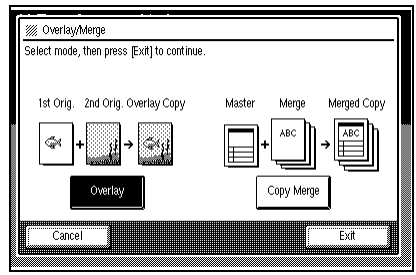
- ❒ The copying speed might be slower in this mode.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.
- ❒ Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the modes, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default setting with the user tools. ☛ See pages 117 and 119

1. Touch the **[Adjust Image]** key.
2. Touch the **[Overlay/Merge]** key.



3 Select the **[Overlay]** or **[Copy Merge]** key.

4 Touch the **[Exit]** key.



5 When setting one original at a time

❶ Set an original on the exposure glass or in the optional document feeder (☛ see page 28 or 30). Then, press the **Start** key.

❒ When you select the **[Copy Merge]** in step 3, the original for the template (master) should be read first.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green or the **Auto Feed** indicator of the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❸ Repeat step ❷ until your copying is finished.

❒ To clear the template (master), or finish your copying, press the **Enter** key.

5 When setting a stack of originals in the document feeder

❶ Set a stack of originals (☛ see page 28) in the document feeder and press the **Start** key.

❒ When you select the **[Copy Merge]** in step 3, the original for the template (master) should be on the bottom.

❒ The last page should be on the bottom.

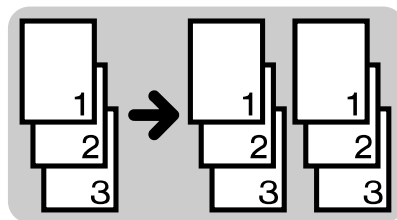
❒ To clear the template (master) or finish your copying, press the **Enter** key.

OPTIONAL FINISHING

❒ Duplex mode (from an even number of one-sided originals to two-sided copies in Top to Top orientation) and Margin Adjustment (0.2" width right margin for the back side) are default settings. If you want to change the modes, touch the **[Duplex/Series Copies]** and **[Adjust Image]** keys. You can change this default settings with the user tools. . ☛ See pages 117 and 119

Sorting Into Sets With Finisher (123,123,123) (Sort)

Copies can be assembled as sets in sequential order by sliding the shift tray from side to side.



Note: This function can be used only when your machine is equipped with the optional finisher.

Notes for Sort mode

❒ You can make up to 999 copy sets at a time. However, when the number of copies exceeds the capacity of the shift tray, remove copies from the copy tray. Regarding the capacity of finisher, ☛ see the table on page 93.

❒ Different size originals can be used only when you make one-sided copies from one-sided originals.

❒ After starting copying, the only setting you may change is image density, The change will apply from the next copy. ☛ See page 36.

❒ The maximum number of pages that can be stored is as follows:
A4, 8 1/2" x 11": Approximately 100 pages (images)

❒ You can change settings of this mode using the user tools. ☛ See page 127.

❒ When you make two-sided copies, the maximum number of copies stacked in the duplex unit at a time is limited. For details, ☛ see page 44.

❒ For this finisher, the following limitations apply:

Metric version

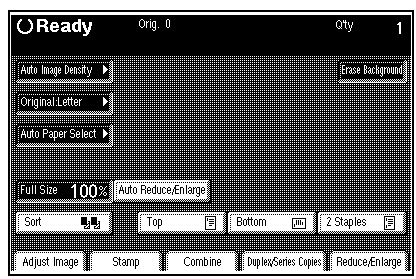
Paper size		Paper weight		Maximum capacity
Maximum	Minimum	Maximum	Minimum	A4 or smaller: 1,500 sheets B4 or larger: 1,000 sheets
A3	A5	157 g/m2	52 g/m2	

Inch version

Paper size		Paper weight		Maximum capacity
Maximum	Minimum	Maximum	Minimum	8 1/2" x 11" or smaller: 1,500 sheets 8 1/2" x 14" or larger: 1,000 sheets
11" x 17"	5 1/2" x 8 1/2"	42 lb	14 lb	

❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

1 To select Sort mode, touch the **[Sort]** key.



2 Enter the number of copies required using the **Number** keys.

3 **When setting one original at a time**

❶ Set an original on the exposure glass or in the optional document feeder (☛ see pages 28 or 30). Then press the **Start** key. The copier starts memorizing the original image.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green, or the **Auto Feed** indicator of the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❒ Set the original in the same direction as step ❶.

❒ When the memory capacity reaches 0%, the copier stops memorizing. Press the **Start** key to finish copy jobs which are already in memory. After that, follow the instructions on the display.

❸ Repeat step ❷ until all originals are scanned.

❹ After all originals are put into memory, press the **Enter** key.

❺ Press the **Start** key.

❒ If you want to stop storing images or to delete stored images, ☛ see page 45.

❒ If you make one-sided copies, the first set of copies has been completed when all originals are stored in memory.

3 When setting a stack of originals in the document feeder

❶ Set a stack of the originals in the document feeder (☛ see page 28), then press the **Start** key.

❒ Last page should be on the bottom.

❒ When memory runs out during copying, the machine can be programmed to behave in two ways with the user tools.

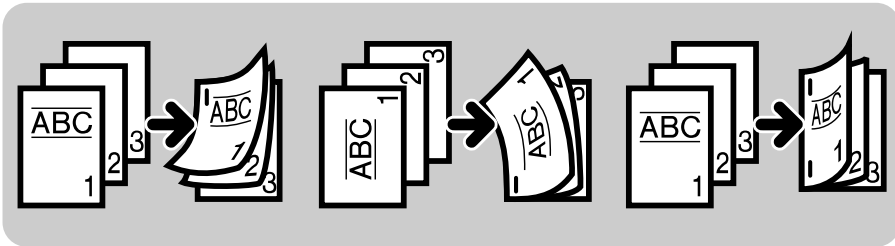
♦ Memory Full Auto Scan Restart = **[Yes]**
→ After all images in memory are copied, the machine will re-start scanning automatically.
You should re-order your copies after all copy jobs are finished.

♦ Memory Full Auto Scan Restart = **[No]**
→ The machine will wait for you to press the **Start** key. At this point you should remove your copies from the copy tray. Press the **Start** key and then follow the instructions on the display to continue copying.

If you want to change the user tools setting, ☛ see page 127.

❒ If you want to stop storing images or to delete stored images, ☛ see page 45.

Stapling With Finisher (Staple)



Note: This function can be used only when your machine is equipped with the optional finisher.

❒ For this mode, the following limitations apply:

Metric version:

Paper size		Paper weight		Stapler capacity	Shift tray capacity
Maximum	Minimum	Maximum	Minimum		
A3	B5	80 g/m^2	64 g/m^2	A4 or smaller: from 2 to 50 sheets B4 or larger: from 2 to 30 sheets	A4: 1,500 sheets (30 sets of 50 sheets) A3: 1,000 sheets

Inch version

Paper size		Paper weight		Stapler capacity	Shift tray capacity
Maximum	Minimum	Maximum	Minimum		
11" x 17"	8 1/2" x 11"	21 lb	17 lb	8 1/2"x11" or smaller: from 2 to 50 sheets 8 1/2"x14" or larger: from 2 to 30 sheets	8 1/2"x11": 1,500 sheets (30 sets of 50 sheets) 11"x17": 1,000 sheets

❒ Post cards, tracing paper, OHP sheets, and adhesive labels, and paper that is curled or has low stiffness cannot be used.

❒ If the number of copies is over the stapler capacity, the copies will be delivered to the shift tray without stapling.

❒ If memory reaches 0% during copying, the copies will be delivered to the shift tray without stapling.

❒ If "Add Staples" is displayed during copying, copies might be delivered to the shift tray without stapling.

❒ Copy paper with different sizes and directions cannot be stapled.

❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

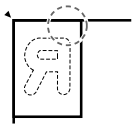
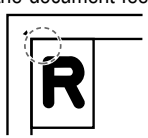
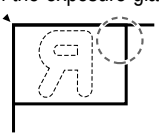
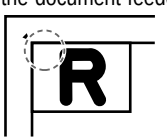
Stapling Position And Original Setting

Single staple in the top left corner in Auto Paper Select

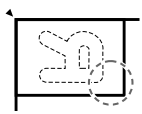
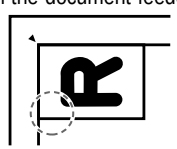
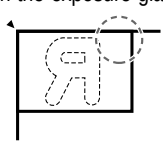
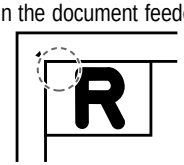
If you select Stapling with the Auto Paper Select and there is no paper that matches the direction of originals, the copier automatically rotates the copy image. As a result, you can get copies stapled in the left upper corner.

- The maximum original image size that can be rotated is as follows:
  Metric version: A4
  Inch version: 8 1/2" x 11"
- The copy image cannot be rotated if you select **[2 Staples]**.

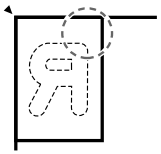
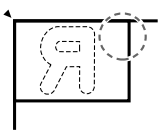
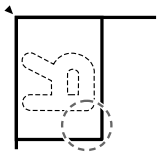
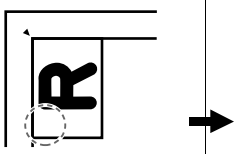
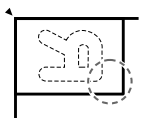
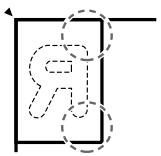
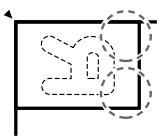
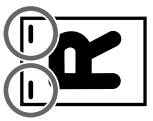
If your original is A4, 8*1/2" x 11"*, set originals and select the **[Top]** key to get copies stapled at the left upper corner.

Stapling position	Original	Original setting	Stapled copies
[Top]	↓ direction	on the exposure glass 	When the image is *not* rotated.
		in the document feeder 	When the image is rotated.
	→ direction	on the exposure glass 	When the image is *not* rotated.
		in the document feeder 	When the image is rotated.

❒ If your original is *larger than A4, 8 1/2" x 11",* (ex. or 11" x 17"), the original image cannot be rotated. In this case, set original and select the [Top] or [Bottom] keys as shown to get copies stapled at the left upper corner.

Stapling position		Original setting	Stapled copies
[Bottom]	If your original is portrait direction.	on the exposure glass  in the document feeder 	
[Top]	If your original is landscape direction.	on the exposure glass  in the document feeder 	

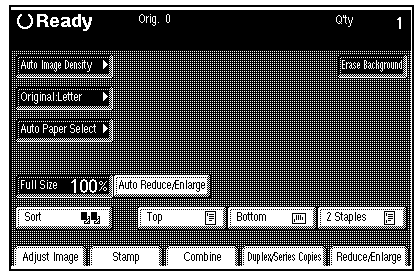
Stapling positions *when there is copy paper that is identical in size and direction as your original*

Stapling position	Original setting			Copies
		on the exposure glass	in the document feeder	
[Top]	direction			
	direction			
[Bottom]	direction			
	direction*			
[2 Staples]	direction			
	direction*			

❒ * recommend when your original is larger than B4, 8 1/2" x 14" or larger.

When Setting One Original At A Time

1. Select one of three stapling by touching a key.



2. Set an original on the exposure glass or in the optional document feeder. (☛ See pages 28 or 30.) Then, press the **Start** key. The copier starts memorizing the original images.

❒ Start with the last page to be copied.

3. When the **Start** key turns green, or the **Auto Feed** indicator of the document feeder is lit, set the next original. If you have set the original on the exposure glass in step 2, press the **Start** key.

❒ Set the original at the same direction in step 2.

4. Repeat step 3 until all originals are scanned.

5. After all originals are put into memory, press the **Enter** key.

6. Follow the instructions on the display. In some cases, you must press the **Start** key.

When Setting A Stack Of Originals In The Document Feeder

1. Select one of three stapling by touching a key.

2. Set a stack of originals in the document feeder (☛ see page 28) , then press the **Start** key.

❒ The last page should be on the bottom.

Sorting Into Sets With 3-bin Sorter (123, 123, 123) (Sort, Rotate Sort)

Note: This function can be used only when your machine is equipped with the optional 3-bin sorter.

❒ For this mode, the following limitations apply:

Metric version (when copies exits face up)

Bin	Paper size		Paper weight		Maximum capacity*
	Maximum	Minimum	Maximum	Minimum	
1st	A3	A6 ◻	157 g/m2	52 g/m2	A4 : 500 sheets A3 : 250 sheets
2nd, 3rd	A3	A6 ◻	105 g/m2	52 g/m2	250 sheets

(* paper weight: 64 ~ 80 g/m2)

Inch version (when copies exits face up)

Bin	Paper size		Paper weight		Maximum capacity*
	Maximum	Minimum	Maximum	Minimum	
1st	11" x 17"	5 1/2" x 8 1/2" ◻	42 lb	14 lb	8 1/2" x 11" : 500 sheets 11" x 17" : 250 sheets
2nd, 3rd	11" x 17"	5 1/2" x 8 1/2" ◻	28 lb	14 lb	250 sheets

(* paper weight: 17 ~ 20 lb)

The operation in this mode is the same as one in Sort or Rotate Sort mode. For details, ☛ see page 43.

❒ Copies will be delivered to the 1st bin. You can change this setting using the user tools. ☛ See "USER TOOLS" in the "General Reference".

Stacking Together All Copies Of A Page with 3-bin Sorter (111, 222, 333) (Rotate Stack)

Note: This function can be used only when your machine is equipped with the optional 3-bin sorter.

For this mode, the following limitations apply:

Metric version (when copies exits face up)

Bin	Paper size		Paper weight		Maximum capacity*
	Maximum	Minimum	Maximum	Minimum	
1st	A3	A6 ⊐	157 g/m2	52 g/m2	A4 : 500 sheets A3 : 250 sheets
2nd, 3rd	A3	A6 ⊐	105 g/m2	52 g/m2	250 sheets

(* paper weight: 64 ~ 80 g/m2)

Inch version (when copies exits face up)

Bin	Paper size		Paper weight		Maximum capacity*
	Maximum	Minimum	Maximum	Minimum	
1st	11" x 17"	5 1/2" x 8 1/2" ⊐	42 lb	14 lb	8 1/2" x 11" : 500 sheets 11" x 17" : 250 sheets
2nd, 3rd	11" x 17"	5 1/2" x 8 1/2" ⊐	28 lb	14 lb	250 sheets

(* paper weight: 17 ~ 20 lb)

The operation in this mode is the same as one in Rotate Stack mode. For details, ☛ see page 46.

❒ Copies will be delivered to the 1st bin. You can change this setting using the user tools. ☛ See "USER TOOLS" in the "General Reference".

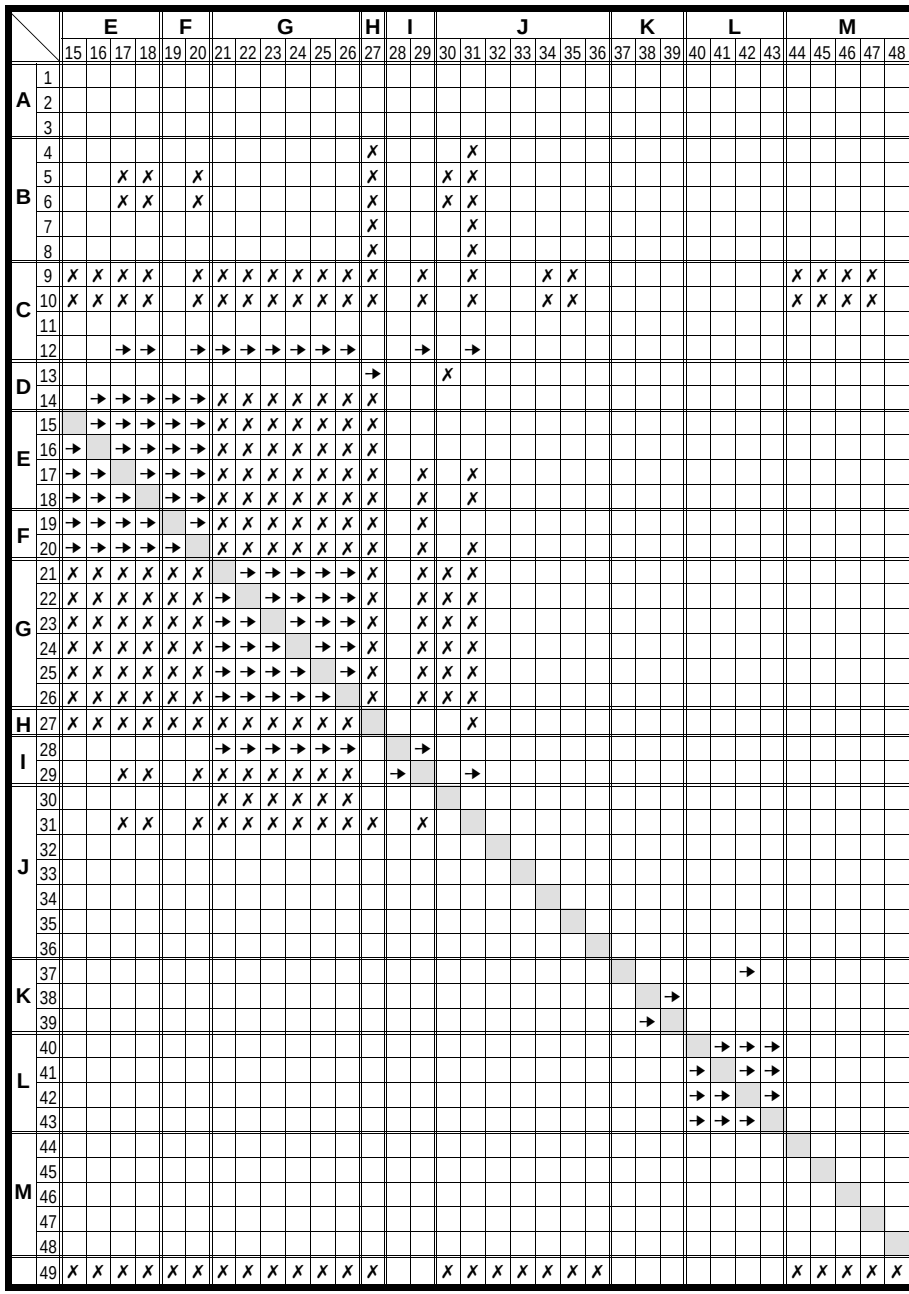
COMBINATION CHART

❒ The combination chart on pages 104 and 105 shows which modes can be used together. When you read the chart, please refer to the following tables.

BLANK CELL	means that these modes can be used together.
→	means that the mode after you select will be the mode you're working in.
✗	means that these modes cannot be used together.

A	Setting originals
B	Finishing
C	Selecting copy paper
D	Image Rotation
E	[Duplex]
F	[Series Copies]
G	[Combine]
H	[Overlay/Merge]
I	[Reduce/Enlarge]
J	[Adjust Image]
K	Adjusting image density
L	Selecting original setting
M	[Stamp]

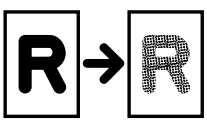
Mode before you select \ Mode after you select			A			B					C				D	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
A	1	Setting original on the exposure glass		→	→											
	2	Setting an original in the DF (SADF)	→		→											
	3	Setting a stack of originals in the DF (ADF)	→	✗												
B	4	Sort					→	→			✗	✗				
	5	Rotate Sort(with& without optional 3-bin sorter)				→		→			✗	✗				
	6	Rotate Stack(with& without optional 3-bin sorter)				→	→				✗	✗				
	7	Sort with optional finisher							→		✗	✗				
	8	Staple with optional finisher							→		✗	✗				
C	9	Using the bypass tray (standard size)				✗	✗	✗	✗	✗		→	→	→	→	✗
	10	Using the bypass tray (non-standard size)				✗	✗	✗	✗	✗	→		→	→	→	✗
	11	Selecting paper size manually									→	→		→	→	
	12	Auto Paper Select									→	→	→			
D	13	Image Rotation in Auto Paper Select									→	→	→			
	14	Image Rotation in Duplex									✗	✗				
E	15	one-sided → two-sided									✗	✗				
	16	two-sided → two-sided									✗	✗				→
	17	Single (from book original)					✗	✗			✗	✗		✗	✗	→
	18	Multi (from book original)					✗	✗			✗	✗		✗	✗	→
F	19	two-sided → one-sided														→
	20	Book → one-sided					✗	✗			✗	✗		✗	✗	→
G	21	2 one-sided → 1 one-sided (2 in 1)									✗	✗		✗	✗	✗
	22	4 one-sided → 1 one-sided (4 in 1)									✗	✗		✗	✗	✗
	23	4 one-sided → 1 two-sided (4 in 1)									✗	✗		✗	✗	✗
	24	8 one-sided → 1 two-sided (8 in 1)									✗	✗		✗	✗	✗
	25	4 one-sided → booklet (4 in 1)									✗	✗		✗	✗	✗
	26	16 one-sided → booklet (16 in 1)									✗	✗		✗	✗	✗
H	27	Overlay/Merge				✗	✗	✗	✗	✗	✗	✗				✗
I	28	Reducing/Enlarging														
	29	Auto Reduce/Enlarge									✗	✗		→	→	
J	30	Double Copies					✗	✗							✗	
	31	Image Repeat				✗	✗	✗	✗	✗	✗	✗		✗	✗	
	32	Erase Center														
	33	Erase Border														
	34	Margin Adjustment for front side									✗	✗				
	35	Margin Adjustment for back side									✗	✗				
	36	Positive/Negative														
K	37	Erase Background														
	38	Auto Image Density														
	39	Manual Image Density														
L	40	Letter mode														
	41	Letter/Photo mode														
	42	Photo mode														
	43	Generation Copy mode														
M	44	Auto Stamping									✗	✗				
	45	User Stamping									✗	✗				
	46	Date Stamping									✗	✗				
	47	Page Numbering									✗	✗				
	48	Background Numbering														
	49	Interrupt Copying				✗	✗	✗	✗	✗					✗	✗


E
F
G
H
I
J
K
L
M
15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
A 1 2 3
B 4 5 6 7 8
C 9 10 11 12
D 13 14
E 15 16 17 18
F 19 20
G 21 22 23 24 25 26
H 27
I 28 29
J 30 31 32 33 34 35 36
K 37 38 39
L 40 41 42 43
M 44 45 46 47 48
49

WHAT TO DO IF SOMETHING GOES WRONG

IF YOU CANNOT MAKE CLEAR COPIES 108
IF YOU CANNOT MAKE COPIES AS YOU WANT 109

IF YOU CANNOT MAKE CLEAR COPIES

Problem	Cause	Action
Copies appear dirty.	The image density is too dark.	Adjust the image density. ☛ See page 36.
	Erase Background is not selected.	Confirm that the **[Erase Background]** key is dark. If not, touch it.
	The platen cover, exposure glass, or document feeder belt is dirty.	Clean them. ☛ See "MAINTAINING YOUR MACHINE" in the "General Reference".
The reverse side of an original image is copied.	The image density is too dark.	Adjust the image density. ☛ See page 36.
	Erase Background is not selected.	Confirm that the **[Erase Background]** key is dark. If not, touch it.
Copies are too light.	The original has a low contrast image.	Adjust the image density. ☛ See page 36.
	The image density is too light.	
	Damp or rough grain paper is used.	Use dry paper without rough grain.
	Toner bottle is almost empty.	Add toner. ☛ See "ADDING TONER" in the "General Reference".
The same copy area is dirty whenever making copies.	The platen cover, exposure glass, or document feeder belt is dirty.	Clean them. ☛ See "MAINTAINING YOUR MACHINE" in the "General Reference".
Parts of the image are not copied.	The original is not set correctly.	Set originals correctly. ☛ See pages 28 ~ 31.
	An improper paper size is selected.	Select the proper paper size.
Copies are blank.	The original is not set correctly.	Set originals correctly. ☛ See pages 28 ~ 31.
A moire pattern is produced on copies as shown in the illustration. 	Your original has dot pattern image or many lines.	Place the original on the exposure glass at a slight angle.

❒ If you cannot correct the problem by taking the above actions, please contact your service representative.

IF YOU CANNOT MAKE COPIES AS YOU WANT

Finishing

Problem	Cause	Action
Copies are not stapled.	After loading a new staple cartridge, staples might not be ejected the first few times you try to use the stapler.	
	A few sheets might not be stapled. To correct this, try turning over the paper stack in the tray unit. If there is no improvement, change to copy paper with less curl.	
	There are jammed staples in the stapler.	Remove jammed staples. ☛ See "REMOVING JAMMED STAPLES" in the "General Reference".
	The number of copies exceeds the capacity of the stapler.	Check the stapler capacity. ☛ See page 95.
Staples are wrongly positioned.	Originals are not set correctly.	Set originals correctly. ☛ See page 98.

Adjust Image

Problem	Cause	Action
In Double Copies mode, parts of the original image are not copied.	Combination of original and copy paper is not correct.	Select the proper original and copy paper. ☛ See the table on page 83.
In Center/Border mode, parts of the original image are not copied.	You set the wide erased margin.	Set the narrower margin using the user tools. ☛ See page 119.
	Your original has narrow margins on four sides.	

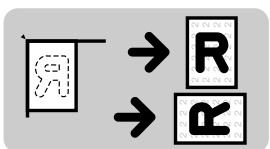
Adjust Image (continued)

Problem	Cause	Action
In Margin Adjustment mode, parts of the original image are not copied.	You set the wide margin.	Set the narrower margin using the user tools. ☛ See page 118.
In Image Repeat mode, the original image is not copied repeatedly.	You selected the same size copy paper as originals, and did not select the proper reproduction ratio.	Select copy paper larger than originals. ☛ See page 87.
		Select the proper reproduction ratio. ☛ See page 87.

Stamp

Problem	Cause	Action
Auto Stamping does not appear on copies.	The original is not set correctly.	Set originals correctly. ☛ See page 73.
Original image and Auto Stamping overlap on copies and original image cannot be read.	You selected the solid density.	Change the density of Auto Stamping using the user tools. ☛ See page 122.
	Your original has narrow margins on four sides.	Change the stamping position. ☛ See page 73.
User Stamping does not appear on copies.	User Stamping is not registered correctly.	Register User Stamping again using the user tools. ☛ See page 128.
	The low density image is registered.	Register User Stamping again with the high density original using the user tools. ☛ See page 128.
	The original is not set correctly.	Set originals correctly. ☛ See page 73.

Stamp (continued)

Problem	Cause	Action
Date Stamping does not appear in the desired direction. Page Numbering does not appear in the desired direction.	You have selected Date Stamping and Page Numbering together.	The stamping position decided afterwards takes priority. Select the same directions for both modes.
Directions of Background Numbering and original images on copies do not match.	Background Numbering cannot be rotated. If you set originals incorrectly, the Background Numbering does not appear copies in correct direction.	Set originals as follows: 
Date Stamping does not appear on copies.	The original is not set correctly.	Set originals correctly. ☞ See page 78.

Duplex

Problem	Cause	Action
Order of copies is not correct.	You set originals in the incorrect order.	When setting a stack of originals in the document feeder, the last page should be on the bottom. If you set a original on the exposure glass, start with the last page to be copied.
Orientation of copies (Top to Top, or Top to Bottom) is not correct.	You set originals in an incorrect direction or the orientation setting is incorrect.	Select the correct orientation, or set originals correctly. ☞ See page 61.

Combine

Problem	Cause	Action
You cannot make a booklet from 16 originals by folding copies.	Combine Original Booklet Format is not correct.	Change setting using the user tools. ☞ See page 120.
Parts of the image are not copied.	Your original is larger than A4 or 8 1/2" x 11".	The maximum original size that can be used is A4, 8 1/2" x 11". Use the correct original.
	You selected a different size copy paper from your originals.	Copy paper must be the same size as your original. Select the correct paper size.
		Select the correct reproduction ratio before using Combine mode.
	Your originals are not identical in size and direction.	Use originals that are identical in size and direction.
Order of copies is not correct.	You set originals in the incorrect order.	When setting a stack of originals in the document feeder, the last page should be on the bottom. If you set an original on the exposure glass, start with the last page to be copied.

CHANGING THE COPIER'S SETTINGS

USER TOOLS 114
User Tools Menu 114
How To Change The Copy Features 116
Copy Features 117
How To Register User Stamp 128

USER TOOLS

This section is for the key operators in charge of this copier. You can change or set the copier's default settings using the following user tools.

User Tools Menu

Basic Settings

❒ Regarding the "Basic Settings," ☛ see page "CHANGING THE MACHINE'S SETTINGS" in of the "General Reference".

Copy Features

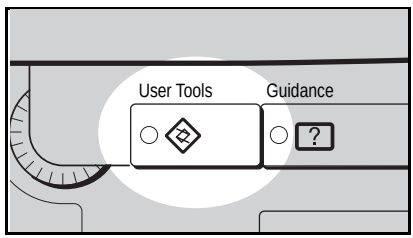
	Menu		☛ See
	Copy Modes	Auto Paper Select Priority	page 119
		Auto Image Density Priority	
		Original Mode Priority	
		Full Main Menu Display	
		Duplex Mode Priority	
		User Reproduction Ratio 1, 2	page 118
		Maximum copy quantity	
		Original beeper	
	Adjust Image	Margin Adjust Front	page 118
		Margin Adjust Back	
		Erase Border	page 119
		Erase Center	
		1 → 2 Duplex Auto Margin Adjust	
		Double Copies Separation Line	page 119
		Combine Originals Booklet Format	page 120
		Image Repeat/Combine Separation Line	

	Menu		☞ See
	Stamp	Page Numbering Format	page 120
		P1,P2 1/5,2/5... Format Position	page 121
		-1-,-2- Format Position	
		Auto Stamping	page 122
		Stamp Layout: Size	
		Stamp Layout: Density	
		Stamp Layout: Position	page 123
		User Stamp	page 124
		User Stamp Layout: Size	
		User Stamp Layout: Density	
		User Stamp Layout: Position	
		User Stamp Layout: Number of Stamps Per Page	
		Date Position/Format: Date Format	
		Date Position/Format: Orientation	
		Date Position/Format: Position	page 125
		Date Position/Format: Position Top Left	
		Date Position/Format: Position Bottom Right	
		Background Numbering Size	page 126
		Background Numbering Density	
	Input/ Output	Duplex Remaining Copy Exit	page 126
		Combine Remaining Copy Exit	
		SADF Auto Reset Time	page 127
		Mixed Original Sizes	
		Auto Sort Mode	
		Memory Full Auto Scan Restart	page 127
		Rotate Sort Auto Paper Continue	

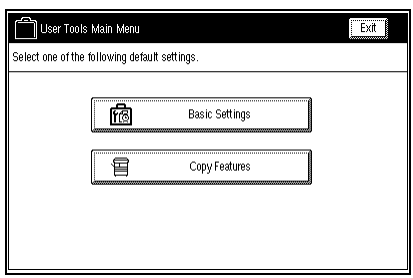
How To Change The Copy Features

1 Confirm that the copier is in the initial condition. If not, press the **Clear Modes/Low Power Mode** key.

2 Press the **User Tools** key.



3 Touch the **[Copy Features]** key.



4 Select the desired settings following the instruction on the display.

❒ **[▼Next]** : Use to go to the next page.
[▲Prev.] : Use to go back to the previous page.
[Exit] : Touch this key after entering the new data.
In the "User Tools Main Menu", touch to exit the User Tools condition.
[Cancel] : Touch to return to the previous menu without changing any data.
[Menu] : Use to go back to the previous menu.

5 To return to the initial condition, press the **User Tools** key.

Copy Features

Copy Modes

MENU	DESCRIPTION
Auto Paper Select Priority	As a default setting, Auto Paper select is selected. You can cancel this setting. ❒ Default: Yes
Auto Image Density Priority	As a default setting, Auto Image Density is selected. You can cancel this setting. ❒ Default: Yes
Original Mode Priority	As a default setting, Letter is selected. You can change it to Letter/Photo, Photo, or Generation Copy. ❒ Default: Letter
Full Main Menu Display	As a default setting, the tray keys are displayed only when Auto Paper Select is canceled, original type setting keys are displayed only when Letter mode is canceled, and the manual image density keys are shown only when the Auto Image Density is canceled. You can cancel this setting and have all keys displayed always. ❒ Default: Hide
Duplex Mode Priority	As a default setting, from even number of one-sided originals to a two-sided copies mode (orientation : Top to Top) is selected. You can cancel this setting, and can select one of the following modes. ♦ **[1 Sided → 1 Sided]** (from one-sided originals to a one-sided copies) ♦ **[2 Sided → 2 Sided]** (from two-sided originals to two-sided copies) ❒ Default: **[1 Sided → 2 Sided]** ♦ from one-sided originals to two-sided copies. ♦ Number of originals: Even ♦ Orientation: Top to Top
[▼ Next]	

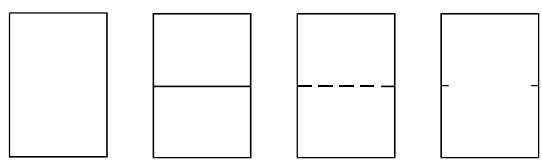
(Copy Modes in Copy Features)

[▼ Next]	
User Reproduction Ratio 1, 2	Up to 2 reproduction ratios (from 25 ~ 400%) which you frequently use can be registered.
Maximum copy quantity	The maximum copy quantity can be set between 1 and 999. ❒ Default: 999
Original beeper	The beeper sounds and a message is displayed, when an operator forgets to remove originals after copying. ❒ Default: On ❒ If the Operation panel beeper setting is set to Off (☛ see "USER TOOLS" in the "General Reference"), the beeper does not sound and only the message is displayed. ❒ If the Auto Response (Human) Sensor is set to No (☛ see "USER TOOLS" in the "General Reference"), this function does not work.
[▲ Prev.]	

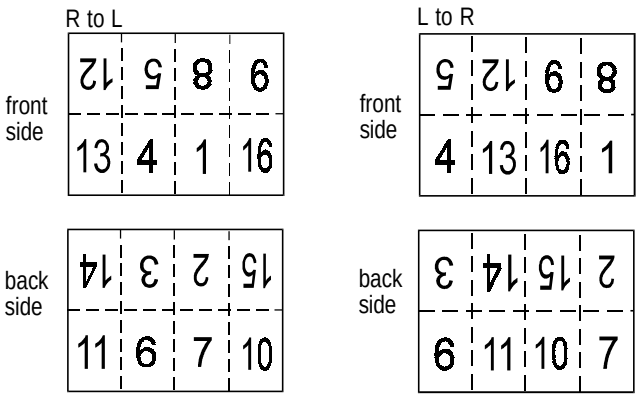
Adjust Image

MENU	DESCRIPTION
Margin Adjust Front **Margin Adjust Back**	The default setting of the margin widths on the front and back page in the Margin Adjustment mode can be changed as follows: Metric version: 0 ~ 30 mm in 1 mm steps* Inch version: 0" ~ 1.0" in 0.1" steps* *both left and right ❒ Default: Metric version: front 5 mm on left, back 5 mm on right Inch version: front 0.2" on left, back 0.2" on right ❒ Margin Adjust Back takes effect only when making two sided copies. ❒ The margin set in the Margin Adjust Back is added on the back side of copies automatically when making two-sided copies from one-sided originals if you select **[Yes]** in the "1 → 2 Duplex Auto Margin Adjust" menu.

(Adjust Image in Copy Features)

MENU	DESCRIPTION
Erase Border Erase Center	The default setting of the width of the erased margins in the Erase Center/Border mode can be changed as follows: Metric version: 3 ~ 50 mm in 1 mm steps Inch version: 0.1" ~ 2.0" in 0.1" steps ❒ Default: Metric version: 10 mm Inch version: 0.4"
1 → 2 Duplex Auto Margin Adjust	As a default setting, the image on the back side of copies is shifted automatically to create the binding margin when making two-sided copies from one-sided originals. This margin is decided in the Margin Adjust Back. You can cancel this setting. ❒ Default: Yes ❒ If you use the Margin Adjustment function, this setting does not come effect.
[▼ Next]	
Double Copies Separation Line	You can select a separation line in the Double Copies mode from broken line, solid line, crop marks, or no line. ❒ Default: Broken  None Solid Broken Crop Marks

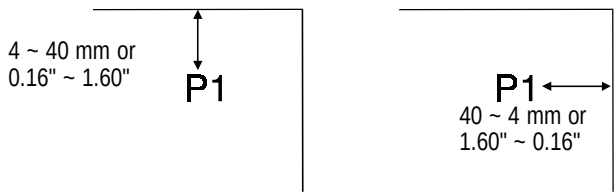
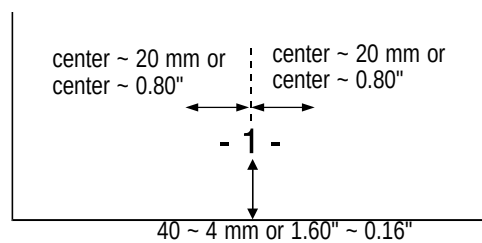
(Adjust Image in Copy Features)

MENU	DESCRIPTION
Combine Originals Booklet Format	When making a booklet from 16 originals in the Combine mode, you can select a booklet that reads from left to right or from right to left. ❒ Default: L to R 
Image Repeat/Combine Separation Line	As a default setting, no separation line is printed on copies in the Image Repeat and Combine modes. You can cancel this setting and print a solid separation line. ❒ Default: No
[▲ Prev.]	

Stamp

MENU	DESCRIPTION
Page Numbering Format	As a default setting, **[P1, P2...]** is selected when entering in the Page Numbering mode. You can cancel this setting and select other formats (**[1/5,2/5...]** or **[-1-,-2-...]**). ❒ Default: P1, P2 ···

(Stamp in Copy Features)

MENU	DESCRIPTION
P1, P2 1/5, 2/5... Format Position	The printing position of Page Numbering (P1, P2 and 1/5, 2/5) can be shifted up/down from the top edge and left/right from the right edge as follows: Metric version: 4 ~ 40 mm in 4 mm steps Inch version: 0.16" ~ 1.60" in 0.16" steps ❒ P1, P2 and 1/5, 2/5 formats can be printed on the right top corner. ❒ Default: Metric version: 8 mm (from the top edge), 12 mm (from the right edge) Inch version: 0.32" (from the top edge), 0.48" (from the right edge) 
-1-, -2- Format Position	The printing position of Page Numbering (-1-, -2-) can be shifted up down from the bottom edge and left/right from the center of paper as follows: Metric version: up/down: 4 ~ 40 mm in 4 mm steps left/right: 0 (center) ~ 20 mm in 2 mm steps Inch version: up/down: 0.16" ~ 1.60" in 0.16" steps left/right: 0" (center) ~ 0.80" in 0.08" steps ❒ Only -1-, -2- format can be printed on the center of the bottom. ❒ Default: Metric version: 8 mm (from the bottom edge), 0 mm (center) Inch version: 0.32" (from the bottom edge), 0" (center) 

(Stamp in Copy Features)

MENU	DESCRIPTION
Auto Stamping	As a default setting, "URGENT" is selected when entering in the Auto Stamping mode. You can cancel this setting and select other messages (CONFIDENTIAL, COPY, PRIORITY, PRELIMINARY, For Your Information, or Internal Use Only). ❒ If your machine is the metric version, the Auto Stamping cannot be used as a default setting. If you want to use this function, contact your sales or service representative. ❒ Default: URGENT

Stamp Layout

You can change the size, density, and position of each message of Auto Stamping (URGENT, COPY, PRIORITY, PRELIMINARY, CONFIDENTIAL, For Your Information, and For Internal Use Only)

❒ If your machine is the metric version, the Auto Stamping cannot be used as a default setting. If you want to use this function, contact your sales/service representative.

Size	There are four sizes of Auto Stamping message: 1 X, 2 X, 4 X, 8 X. ❒ Default: 1 X (32 mm x 64 mm, 1.28" x 2.56")
Density	There are three density levels (Solid, Fine Screen, and Coarse Screen). ❒ Default: Solid ❒ If the copy image overlaps the Auto Stamping in Solid, the copy image cannot be seen. Fine Screen, the copy image can be seen. Coarse Screen, the copy image can be seen more.

(Stamp in Copy Features)

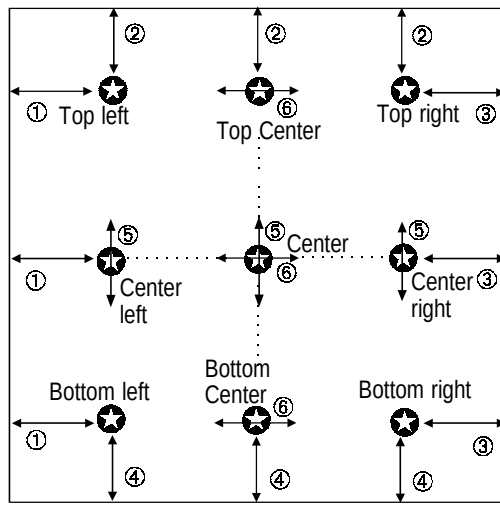
MENU	DESCRIPTION

Stamp Layout (continued)

Position

The default printing position of Auto Stamping can be selected from one of nine positions. Also, the default printing position can be adjusted as follows:

❒ Default: Top Right
Metric version: 24 mm from top and right edge
Inch version: 0.96" from top and right edge

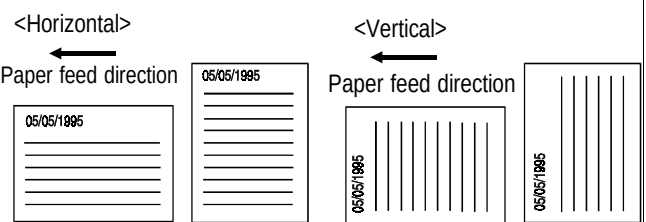


		Metric version	Inch version
①	from the left edge	4 ~ 104 mm	0.16" ~ 4.16"
②	from the top edge	4 ~ 144 mm	0.16" ~ 5.76"
③	from the right edge	4 ~ 104 mm	0.16" ~ 4.16"
④	from the bottom edge	4 ~ 144 mm	0.16" ~ 5.76"
⑤	from the horizontal center line of paper	above 72 mm ~ below 72 mm	above 2.88" ~ below 2.88"
⑥	from the vertical center line of paper	left 52 mm ~ right 52 mm	left 2.08" ~ right 2.08"

❒ Metric version: in 4 mm steps
Inch version: in 0.16" steps

[▼ Next]

(Stamp in Copy Features)

MENU	DESCRIPTION
	[▼ Next]
User Stamp	Using the **[Register]** key, you can register your own messages as user stamps. Up to four stamp can be registered. Also, you can delete registered user stamps using the **[Delete]** key. To perform this function, ☛ see page 128. ❒ A key with ⇨ has a registered stamp in it.
	User Stamp Layout You can set the size, density, and position for each user stamp. The procedure is the same as the "Stamp Layout" on pages 122 and 123.
Size	☛ See page 122.
Density	☛ See page 122.
Position	☛ See page 123.
Number of Stamps Per Page	As a default setting, one user stamp is printed on a copy. You can cancel this setting, and print a user stamp repeatedly on a overall copy. ❒ Default: Single
	Date Position/Format
Date Format	You can select the date stamping format from one of three (mm/dd/yyyy, dd.mm.yyyy, or dd/mm/yyyy). ❒ Default: Metric version: dd.mm.yyyy Inch version: mm/dd/yyyy
Orientation	The orientation can be selected horizontal or vertical. ❒ Default: Horizontal 

(Stamp in Copy Features)

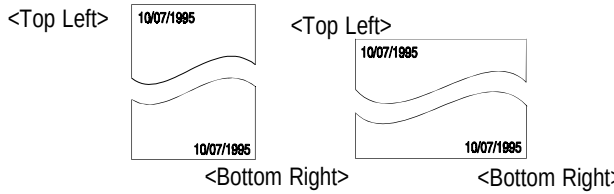
MENU	DESCRIPTION

Date Position/Format (continued)

Position

The date can be printed at Top Left or Bottom Right.

❒ Default: Top Left



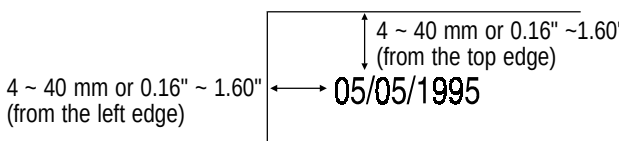
Position Top Left
Position Top Right

The stamping position can be shifted as follows.

Metric version: 4 ~ 40 mm in 4 mm steps
Inch version: 0.16" ~ 1.60" in 0.16" steps

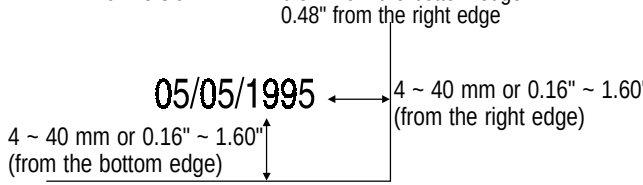
❒ Top Left Default

Metric version: 8 mm from the top edge
32 mm from the left edge
Inch version: 0.32" from the top edge
1.28" from the left edge



❒ Bottom Right Default

Metric version: 8 mm from the bottom edge
12 mm from the right edge
Inch version: 0.32" from the bottom edge
0.48" from the right edge



(Stamp in Copy Features)

MENU	DESCRIPTION
Background Numbering Size	There are three sizes of the Background Numbering. The size of one letter can be changed as follows: Large (approximately 64 x 32 mm or 2.56" x 1.28") Medium (approximately 32 x 16 mm or 1.28" x 0.64") Small (approximately 8 x 4 mm or 0.32" x 0.16") ❒ Default: Medium
Background Numbering Density	There are four density levels: Very Light, Light, Medium, or Dark. ❒ Default: Light
[▼ Next]	

Input/Output

MENU	DESCRIPTION
Duplex Remaining Copy Exit	As a default setting, when making two-sided copies from one-sided, or using Multi mode with the optional document feeder, the last copy paper can exit automatically with the back side blank under the following conditions. You can cancel this setting. ◆ When you select **[Even]**, although the number of originals are odd. ◆ When you select **[Odd]**, although the number of originals are even. ◆ When your originals are finished in the Multi mode. ❒ Default: Yes ❒ This function does not come effect, when you set one original at a time in the document feeder or set an original on the exposure glass.
Combine Remaining Copy Exit	As a default setting, even if the number of originals in the optional document feeder is less than the number required in the selected Combine mode, copies can be made. You can cancel this setting. ❒ Default: Yes ❒ This function does not come effect, when you set one original at a time in the document feeder or set an original on the exposure glass.

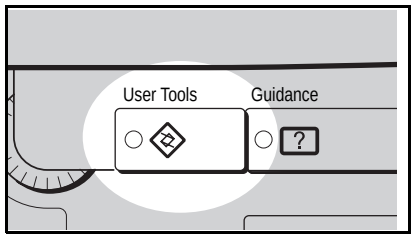
(Input/Output in Copy Features)

MENU	DESCRIPTION
SADF Auto Reset Time	When you set one original at a time in the optional document feeder, the Auto Feed indicator lights for a selected time after an original is fed to show that the document feeder is ready for another original. You can adjust this time from 3 seconds to 60 seconds in 1 second steps. ❒ Default: 10 seconds
Mixed Original Sizes	As a default setting, you cannot use originals of different sizes and directions when you set originals in the optional document feeder. You can cancel this setting. ❒ Default: No ❒ If you set the copier in this mode, the copying speed becomes slower in some modes.
Auto Sort Mode	As a default setting, Sort mode is not selected. You can cancel this setting and can select Sort mode as a default setting. ❒ Default: No
[▼ Next]	
Memory Full Auto Scan Restart	When memory runs out during copying, the machine can be programmed to behave in two ways with the user tools. **[Yes]**: After all images in memory are copied, the machine will re-start scanning automatically. You should re-order your copies after all copy jobs are finished. **[No]**: The machine will wait for you to press the **Start** key. At this point you should remove your copies from the copy tray. Press the **Start** key and then follow the instructions on the display to continue copying. ❒ Default: No
Rotate Sort Auto Paper Continue	As a default, two paper trays identical in size but different in direction must be available in the Rotate Sort or Rotate Stack mode. If there are not two paper trays identical in size but different in direction, the copier stops copying. Also, the copier stops if one of the selected paper trays in use runs out of paper. You can change this setting, so that the copier continues copying using paper trays identical in size and direction. ❒ Default: No
[▲ Prev.]	

How To Register User Stamp

1. Confirm that the copier is in the ready condition.

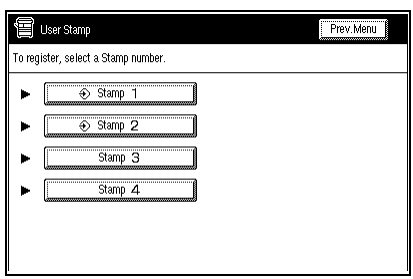
2. Press the **User Tools** key.



3. Touch the keys in the following order.
   [Copy Features] key
   [Stamp] key
   [Next] key
   [Register] key of the User Stamp menu

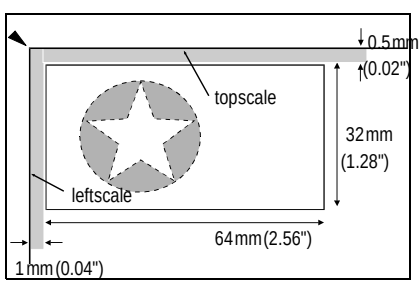
4. Select the user stamp number by touching a key.

- A key with ⇨ has a registered stamp in it. If you want to overwrite it, follow the instructions on the display after touching the key with ⇨.



5. Place your message on the exposure glass *face down* as shown in the illustration. Then, touch the **[Scan]** key.

- The area that can be registered is 64 mm x 32 mm (2.56" x 1.28") as shown in the illustration.
- Margins from the top and left scale cannot be registered as shown in the illustration.



6. Press the **User Tools** key to return to the ready condition.

SPECIFICATIONS

COPIER 130

COPIER

Configuration:	Desktop
Process:	Dry electrostatic transfer system
Memory capacity:	approximately 1GB hard disk
Scanning method:	Flatbed solid state scanner
Resolution:	400 x 400 dpi
Gray scale:	256 levels
Originals:	Sheet, book
Original thickness:	less than 30 mm, 1.18"
Original size:	Maximum: A3, 11" x 17"
Copy paper size:	☛ See "CHANGING THE PAPER SIZE" of the "General Reference".
Copy paper weight:	1st paper tray: 60 ~ 105 g/m^2 (16 ~ 28 lb) bypass tray: 60 ~ 157 g/m^2 (16 ~ 42 lb) large capacity tray: 60 ~ 128 g/m^2 (16 ~ 34 lb) when making two-sided copies: 64 ~ 105 g/m^2 (17 ~ 28 lb)
Copy paper capacity:	1st paper tray: 500 sheets or less than 53 mm, 2.08" bypass tray: 40 sheets or less than 4 mm, 0.15" large capacity tray: 1000 sheets or less than 120 mm, 4.72"
Optional copy tray capacity:	A3, 11" x 17": 200 sheets B5 or smaller: 200 sheets B4 or smaller: 500 sheets
Copying speed:	40 copies/minute (A4 ▯, 8 1/2" x 11" ▯, in Full Size mode)
First copy time:	less than 5.2 seconds (A4 ▯, 8 1/2" x 11" ▯, feeding from the large capacity tray)
Warm-up time:	less than 140 seconds (20°C, 68°F)

Toner replacement: Bottle exchange (700 g)

Power source: 120V , 60Hz, more than 12A

Preset reproduction ratios: 5 enlargement and 7 reduction

	Metric version	Inch version
Enlargement	400%	400%
	200%	200%
	141%	155%
	122%	129%
	115%	121%
Full Size	100%	100%
Reduction	93%	93%
	87%	85%
	82%	77%
	71%	74%
	65%	65%
	50%	50%
	25%	25%

Power consumption:

	Copier only	Full system*
Warm-up	less than 0.88 kW	less than 0.90 kW
Stand-by	less than 0.20 kW	less than 0.22 kW
Copying	less than 1.20 kW	less than 1.20 kW
Maximum	less than 1.44 kW	less than 1.44 kW

* Full system: copier with document feeder, finisher, and paper tray unit

Noise emission:

Sound pressure level (The measurements are made according to ISO 7779 at the operator position)

	Copier only	Full system
Stand-by	25 dB (A)	25 dB (A)
Copying	54 dB (A)	59 dB (A)

* Full system: copier with document feeder, finisher, and paper tray unit

Sound power level (The measurements are made according to ISO 7779.)

	Copier only	Full system
Stand-by	40 dB (A)	40 dB (A)
Copying	66 dB (A)	69 dB (A)

* Full system: copier with document feeder, finisher, and paper tray unit

Dimensions:

	Width	Depth	Height
Copier with platen cover, copy tray, and paper tray unit	1,150 mm 45.3"	655 mm 25.8"	1,024 mm 40.4"
Copier with document feeder, finisher, and paper tray unit	1,551 mm 61.1"	655 mm 25.8"	1,110 mm 43.8"
Copier with document feeder, 3-bin sorter, and paper tray unit	1,300 mm 51.2"	655 mm 25.8"	1,110 mm 43.8"

Weight:

Copier with platen cover, copy tray, and 1500-sheet paper tray unit	137.5 kg 303.2 lb
Copier with document feeder, finisher, and 1500-sheet paper tray unit	178.5 kg 393.6 lb
Copier with document feeder, 3-bin sorter, and 1500-sheet paper tray unit	161.0 kg 355.0 lb

Optional equipment:

Document feeder
Finisher
Copy tray
Platen cover
1500-sheet tray unit
1000-sheet tray unit
3-bin sorter

❒ Specifications are subject to change without notice.

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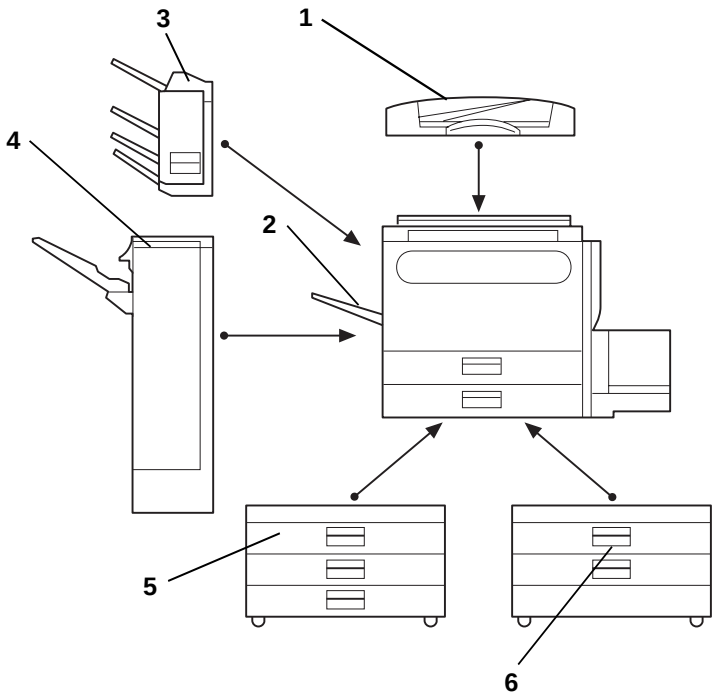
WHERE IS IT &
WHAT IS IT

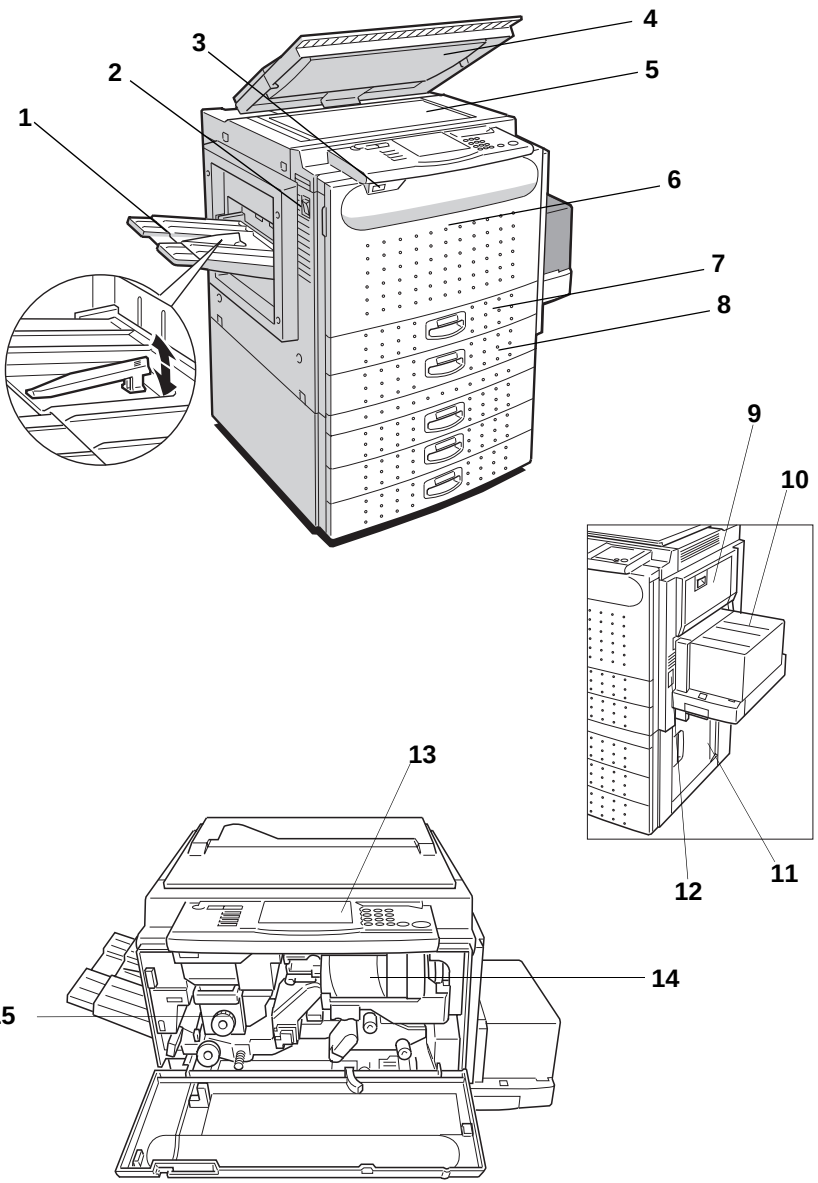
MAIN UNIT AND OPTIONS



1. Document feeder (Option)	Insert a stack of originals here. They will be fed automatically.
2. Copy tray (Option)	Copied/printed papers are delivered here.
3. 3 - bin sorter (Option)	Sorts, stacks copied/printed papers.
4. Finisher (Option)	Sorts, stacks, and staples copied/printed papers.
5. 1500-sheet tray unit (Option)	Holds 1500 sheets of paper.
6. 1000-sheet tray unit (Option)	Holds 1000 sheets of paper.

❒ Other mechanical options: platen cover and key counter

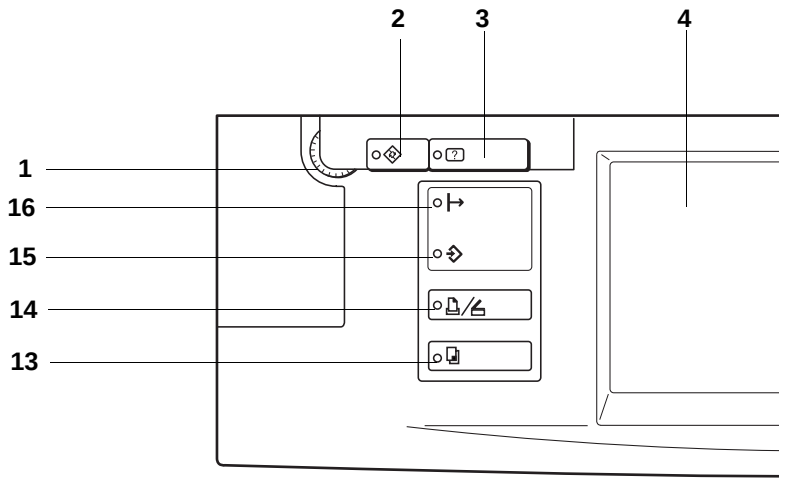
EXTERIOR AND INTERIOR PART NAMES



1. Copy tray (option)	Completed copies are delivered here. Regarding the capacity of the tray.
2. Main switch	Switches the machine between on and standby conditions.
3. Auto response (human) sensor	When someone comes close to the machine, it will automatically switch from Low Power mode to standby mode.
4. Platen cover (option)	Lower this cover over originals for copying.
5. Exposure glass*	Position originals here face down for copying/ scanning. *After turning off the main switch, the exposure glass might be hot because of the anticondensation function. This is not a problem.
6. Front cover	Open to access the inside of the machine.
7. Unit for two-sided copies/prints (Duplex unit)	Makes two-sided copies/prints.
8. Paper tray	Holds 500 sheets of copy paper.
9. Bypass tray	Use to copy/print onto OHP sheets, adhesive labels, translucent paper, post cards, and non-standard size paper.
10. Large capacity tray	Holds 1,000 sheets of paper.
11. Right cover of the optional tray unit	Open to remove misfed paper.
12. Key counter holder	Insert the optional key counter here.
13. Operation panel	Operator controls and touch panel are located here.
14. Toner bottle	Replace the toner bottle when " Add Toner" is displayed on the display.
15. Fusing unit	Fuses the image to the paper. When accessing the inside of the machine, use caution. This unit may be very hot.

OPERATION PANEL

Keys



1. Contrast Dial
Changes the brightness of the display.

2. User Tools key
Changes the basic settings and copy features.

3. Guidance key
Shows guidance for functions.

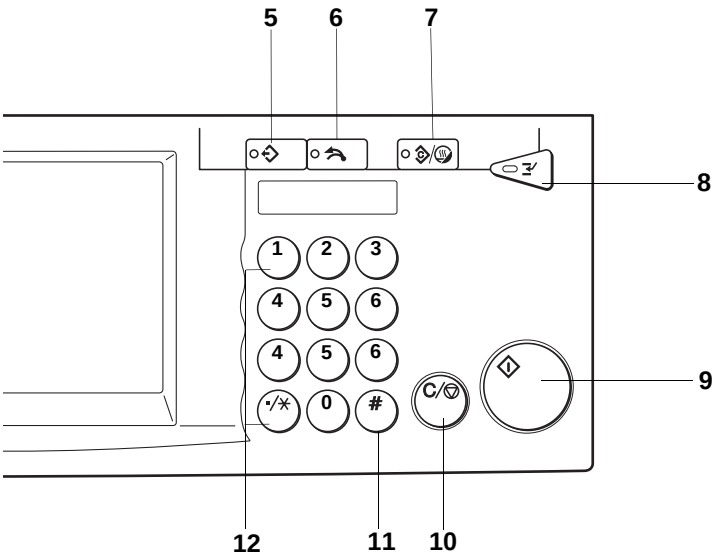
4. Touch Panel Display

5. Program key
Press to select the program mode.

6. Job Recall key
Use to recall your previous copy settings.

7. Clear Modes/Low Power Mode key
Press to clear the previously entered copy job settings. Also use to switch to and from Low Power mode.

8. Interrupt key
Press to make interrupt copies.



9. Start key
Press to start copying. Use to set the Auto Start.

10. Clear/Stop key
While entering numbers, press to cancel a number you have entered. While copying, press to stop copying.

11. Enter key
Use to enter data in selected modes.

12. Number keys
Use to enter the desired number of copies and data for selected modes.

13. Copy key
Use to enter Copy mode from Printer/Scanner mode.

14. Printer/Scanner key
Use to enter Printer/Scanner mode from the copy mode.

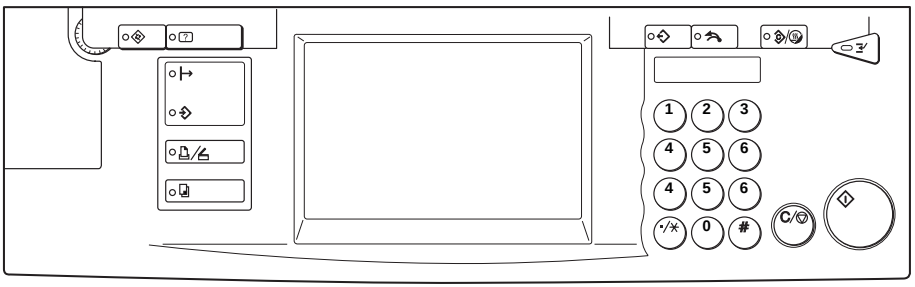
15. Data in indicator

16. On line indicator

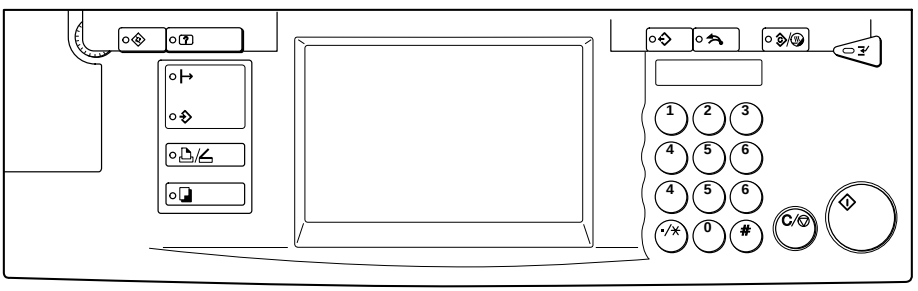
How To Use The Operation Panel

The type of operation panel is different depending on your location.

For U.S. model



For Europe model



The panel layout is grouped as follows:

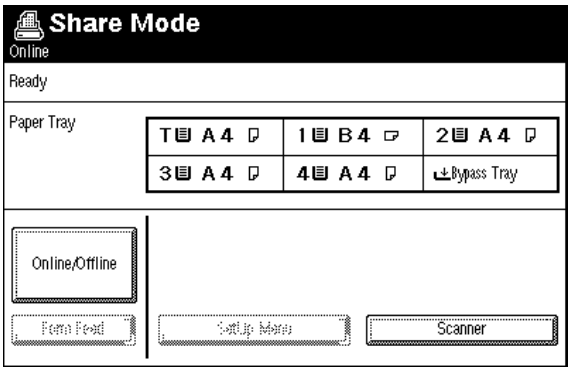
- ❒ Touch Panel Display
  Use to make selections and navigate menus. Also shows the machine status and various messages. The status area is blank when in Printer mode and off-line.
- ❒ Numeric Keypad
  Use to enter numbers and control how the machine functions.
- ❒ Control Keys
  Other keys used when printing and configuring the machine.

When you first turn on the machine, the Touch Panel Display shows the Copy Menu. To access Printer mode, press the **[Printer/Scanner]** button on the left side of the operation panel.

Printer Mode (Printer controller option must be installed)

Press the **Printing/Scanner** key.

The on-line status screen will appear as below.



In this screen shot, access priority is "share".

Scanner Mode (Scanner kit option must be installed)

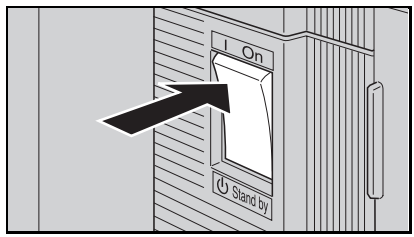
Press the **Printer/Scanner** key.

Touch **[Scanner]**.

BASICS

STARTING THE MACHINE

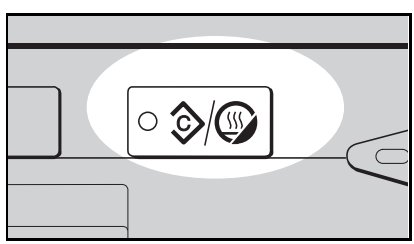
When The Main Switch Is In The Stand-by Position



1. Turn on the main switch.
2. Wait for the machine to warm up. During the warm-up period (within 140 seconds), "⏻ **Please wait.**" appears on the display.
3. After warm-up, "↻ **Ready**" appears on the display.

When The Display Is Off And The Clear Modes/Low Power Mode Key Is Lit

The machine is in Low Power mode.



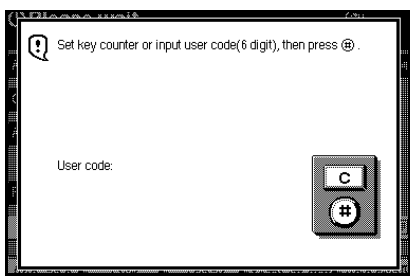
1. Hold down the **Clear Modes/Low Power Mode** key until the indicator is goes out. The machine will return to the standby condition.

❒ The following actions will also wake up the machine:

- ♦ Operating the machine.
- ♦ Opening or closing the optional platen cover.
- ♦ Opening or closing the optional document feeder.
- ♦ Setting originals in the optional document feeder.
- ♦ Opening or closing the bypass tray.
- ♦ Pressing any key.

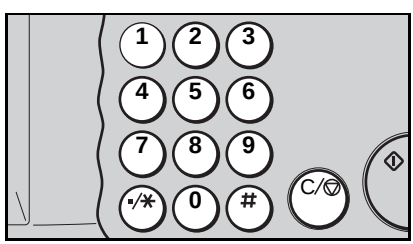
When Prompted For A User Code

1 The display instruct you to input your user code.



2 Enter your user code (6 digits) using the **Number** keys.

❒ If you make a mistake, touch the **[C]** key or press the **Clear/Stop** key. and enter the right number.



3 Touch the **[#]** key or press the **Enter** key.

❒ To prevent others from making copies with your user code, when you have finished using the machine, hold down the **Clear/Stop** key and press the **Clear Modes/Low Power Mode** key.

SWITCHING BETWEEN THE COPIER, PRINTER AND SCANNER FUNCTIONS

By default, the machine is in Share mode and set to Copier when you first switch on.

To Use The Copier:

Press the Copy key

Depending on the machine configuration, it may not be possible to use this function while another job is running.

To Use The Printer:

Press the Printer/Scanner key.
The display will change.
☛ refer the screen on page 9.

Depending on the machine configuration, it may not be possible to use this function while another job is still running.

To Use The Scanner:

1. **Press the Printer/Scanner key.**
   The machine will switch to Printer.
   ☛ refer the figure on page 9.

2. **Touch the Scanner key.**
   The machine will switch to Scanner.

   Depending on the machine configuration, it may not be possible to use this function while another job is still running.

   If the Scanner Only Mode is selected, scanner function can be used at the begining.

How Are Multiple Scan, Print And Copy Jobs Handled?

Four modes are available that decide the priority the machine gives to various jobs.

Share Mode

Share mode lets you copy, print and scan, and is the default mode when you switch the machine on.

If there are no current print or scan jobs, the Copier screen is shown and you can use all the normal Copier functions.
The screen will change to the Printer screen if:

- A print job is received.
- You press the **[Printer/Scanner]** button.

If you wish to switch back to the Copy screen, just press the **[Copy]** key. If there are no current print jobs, the screen will change immediately. If the machine is printing, however, the screen will change as soon as the current print job has finished. Any other queued print jobs will be temporarily suspended until you finish your copying.

Note that even if the Copier screen is shown, the machine will still receive print jobs as long as the **Online** indicator is lit.

Printer Priority Mode

This is the same as Share mode, but you cannot use the **[interrupt]** buttons.

Printer Only Mode

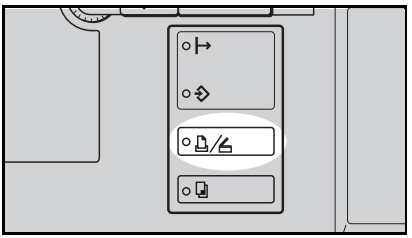
Only printing is allowed. You cannot use the **[Interrupt]**, **[Copy]** or **[Scanner]** buttons.

Scanner Only Mode

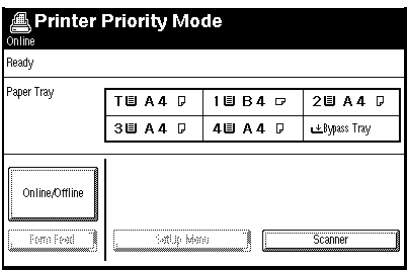
Only scanning is allowed and the machine is off-line for print jobs. You cannot use the **[Interrupt]** or **[Copy]** keys.

Changing To Another Mode

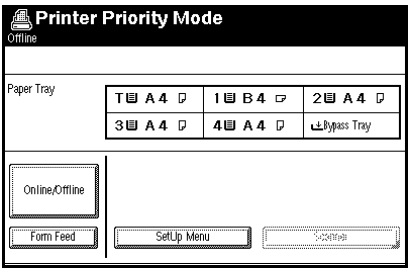
1 Make sure the machine is in Copier mode.
Press the **Printer/Scanner** key to enter Printer mode.



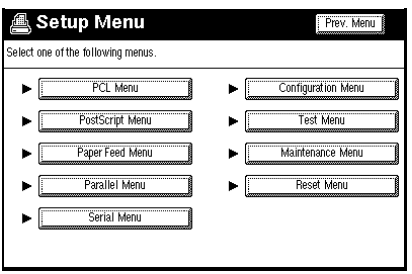
2 Touch **[On-line/Off-line]**.



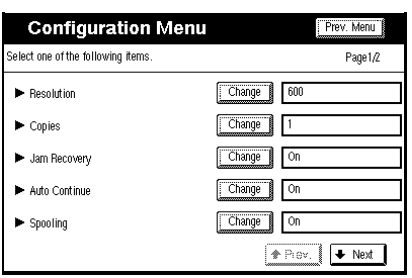
3 Touch **[Setup Menu]**.



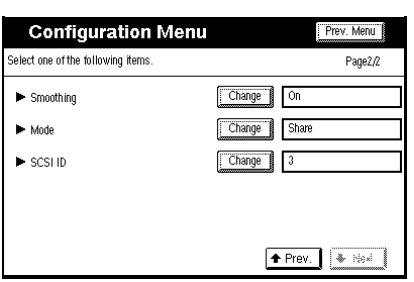
4 Touch **[Configuration Menu]**.



5 Touch **[Next]**.



6 Touch **[Change]** in the mode options.
Touch either **[Share]**, **[Scanner only]**, **[Printer Priority]** or **[Printer only]**.
Touch **[Exit]**.



7 Touch **[Preve. Menu]** three times.

8 Touch **[On-line/Off-line]** to return to the printer on-line screen.

INTERRUPTING THE CURRENT JOB

This machine cannot perform two jobs at the same time. Multiple jobs are carried out in the order that they were started.

You can interrupt a printing job to make copies.

Depending on the original configuration settings, you may not even be able to interrupt the above cases.

After your interrupt operation has finished and the auto-clear time has elapsed, the machine goes back tothe operation it was doing before you interrupted it. For more about the configuration settings,

The following functions cannot be used during an interrupt operation:

- ❒ Duplex mode
- ❒ Sort, Rotate Sort
- ❒ Stack, Rotate Stack
- ❒ Stapling
- ❒ Adjust Image mode
- ❒ Stamp
- ❒ Combine
- ❒ Series Copies

Interrupting A Print Job To Make Copies

1. Press the **Interrupt** key.
2. Make your copies as you would normally do.

RECOMMENDED & NON-RECOMMENDED ORIGINALS

Recommended Originals

❒ For details of originals that the optional document feeder can handle, ☛ see page 66.

Non-recommended Originals For The Optional Document Feeder

⚠*CAUTION: The following types of originals are not recommended for use with the document feeder. Place them directly on the exposure glass.*

❒ Originals thicker than 128 g/m^2, 34 lb.

❒ Originals thicker than 105 g/m^2, 28 lb. when using two-sided originals

❒ Originals thinner than 40 g/m^2, 11 lb. But for originals between 40 and 52 g/m^2 (11 and 14 lb.), the document feeder must be set to Thin Paper mode. ☛ See the "Copy Reference".

❒ Originals larger than A3, 11" x 17"

❒ Originals smaller than A5, 5$_{1/2}$" x 8$_{1/2}$"

❒ Paper with any king of coating (such as carbon) on the back

❒ Folded, curled, creased, or damaged originals

❒ Mailing labels, or perforated originals

❒ OHP transparencies

❒ Translucent paper

❒ Pasted originals

❒ Damp originals

❒ Sticky originals

❒ Wavy originals

❒ Originals that are not made from paper

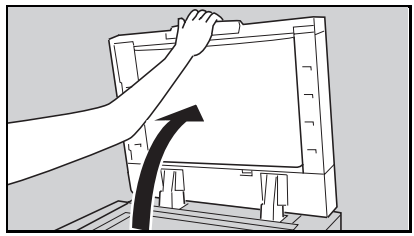
❒ Originals written in pencil on both sides, or two-sided carbon originals

❒ Thermal fax paper, CRO (camera ready original) or aluminum foil

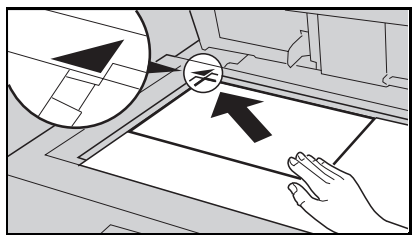
❒ Originals with globs of ink from a ball-point pen

SETTING ORIGINALS ON THE EXPOSURE GLASS

1 Lift the optional platen cover or the optional document feeder.



2 Set the original *face down* on the exposure glass. The original should be aligned to the rear left corner.



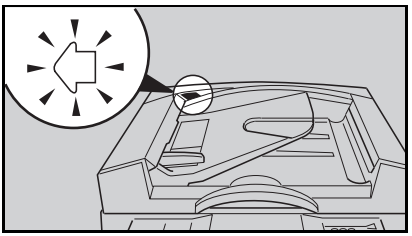
3 Lower the optional platen cover or the optional document feeder.

SETTING A STACK OF ORIGINALS IN THE OPTIONAL DOCUMENT FEEDER (ADF)

You can insert a stack of originals (one-sided or two-sided) of the same size into the document feeder. These originals are individually fed onto and removed from the exposure glass.

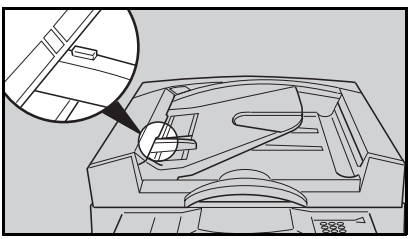
1 Correct any curl, fold, or crease in the originals before setting.

2 Confirm that the **Insert Original** indicator is lit before setting the originals.

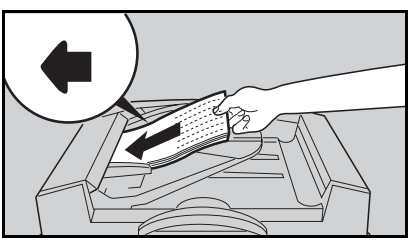


3 Confirm that no previous originals remain on the exposure glass.

4 Adjust the guide to the original size.

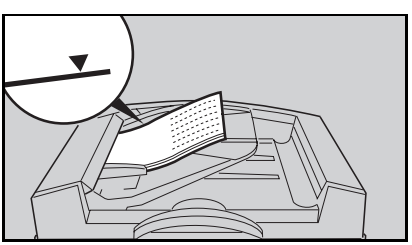


5 Set the originals into the document feeder until the **Insert Original** indicator goes off.



- ❒ When using the machine as a scanner, originals can be set either face down and face up.
- ❒ The guide must touch the front side of the originals.

- ❒ Do not stack originals above the limit mark.



SETTING ONE ORIGINAL AT A TIME IN THE OPTIONAL DOCUMENT FEEDER (SADF)

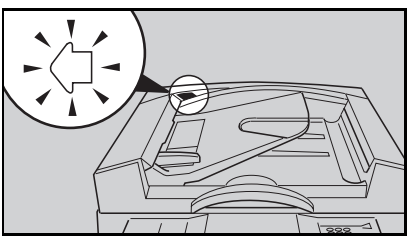
You can insert one original at a time into the document feeder. The original is automatically fed onto and removed from the exposure glass.

❒ SADF is not available, when using the machine as a scanner with an ISIS driver.

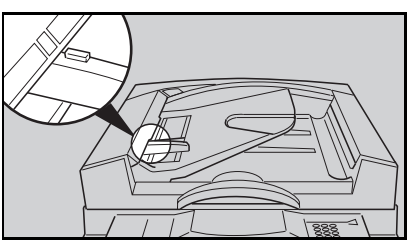
1 Correct any curl, fold, or crease in the originals before setting.

2 Confirm that the **Insert Original** indicator is lit before setting the originals.

3 Confirm that no previous originals remain on the exposure glass.



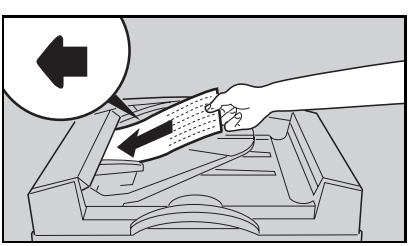
4 Adjust the guide to the original size.



5 Set the original into the document feeder until the **Insert Original** indicator goes off.

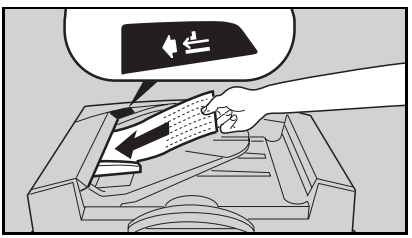
❒ If you are copying a stack of originals one sheet at a time and you want to keep them in order, start with the last page of the originals.

❒ The original guide must touch the front side of the original.



6 Press the **Start** key.

7 While the **Auto Feed** indicator is lit after an original is fed, set the next original. The original is automatically fed and copied.



❒ If you have set more than two originals, the **Auto Feed** indicator is not lit after the last original is fed. In this case, press the **Start** key again after setting an original.

WHAT TO DO IF SOMETHING GOES WRONG

TROUBLESHOOTING

Machine's Condition	Action
Nothing happens when the main switch is turned on.	Check the power cord. Is it properly plugged into the outlet? ➠ Plug it in firmly.
The machine has automatically switches itself off (Auto Off).	Turn on the main switch.
The **Clear Modes/Low Power Mode** key is lit, and the display is off.	The copier is in Low Power mode. ➠ Press the **Clear Modes/Low Power Mode** key.
and messages are displayed.	Follow the instructions on the display.
Paper runs out.	Load paper.
is displayed.	Add toner.
is displayed.	Add staples.
is displayed.	Remove misfed paper.
is displayed.	
is displayed.	Close the indicated doors or covers.
is displayed.	Set the fusing unit correctly. For position of the fusing unit,
is displayed.	Remove the jammed staples.
is displayed.	Turn the main switch off, wait a few seconds, and then turn it on. If appears again, call your service representative.
is displayed.	Used toner bottle is full. Call your service representative.

Machine's Condition	Action
Staples do not come out at all.	After loading a new staple cartridge, staples might not be ejected the first few times you try to use the stapler. ➠ Try again.
	A few sheets might not be stapled. To correct this, try turning over the paper stack in the tray unit. If there is no improvement, change to paper with less curl.
	There are jammed staples in the stapler. ➠ Remove jammed staples.
Misfeeds occur frequently.	Is the right kind of paper in the paper tray? ➠ Paper size and weight must be within the specification for this copier.
	Is folded, wrinkled, damp, or curled paper in the paper tray? ➠ Always use dry, undamaged paper.
	Is the paper properly set in the paper tray? ➠ Always load paper correctly.
	Are there any pieces of misfed paper or other foreign objects in the machine? ➠ Make sure that the paper path is completely clear of paper and other material after a misfeed.
	Paper size setting is not correct. ➠ Set the proper paper size with the User Tools.

❒ For details of printer and scanner error messages, please refer to the Printer or Scanner Reference.

❒ If you cannot correct the problem by taking the above actions, please contact your service representative.

LOADING PAPER

❒ Regarding paper sizes that can be set, see the following pages:
  1st tray ☛ See page 38, 40, and 41.
  optional tray unit ☛ See page 43.
  large capacity tray ☛ See page 51.

❒ If you want to change the paper size, see the following pages:
  1st tray ☛ See page 38, 40, and 41.
  optional tray unit ☛ See page 43.
  large capacity tray ☛ See page 51.

Non-recommended Paper

❒ Folded, curled, creased, or damaged paper

❒ Torn paper

❒ Perforated paper

❒ Paper with conductive or low electrical resistance coating such as carbon or silver coating

❒ Thermal paper, art paper

❒ Thin paper that has low stiffness

Notes For Paper

❒ Load paper with the copy side *down* in the 500-sheet trays, and with the copy side *up* in the large capacity tray. If copies are curled, try turning the copy paper over in the tray. If there is no improvement, change to copy paper with less curl.

❒ Do not use paper that has been already copied/printed on.

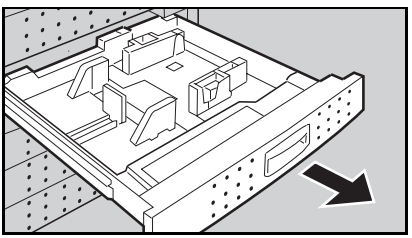
❒ The following types of paper cannot be fed from the paper tray. Load them in the bypass tray.
  • OHP transparencies • adhesive labels • translucent paper
  • post card

❒ Correct curls in paper before loading.

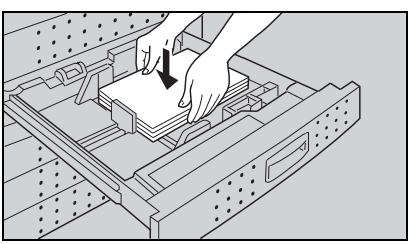
❒ Fan paper to get air between the sheets before loading.

Loading Paper In The Paper Tray

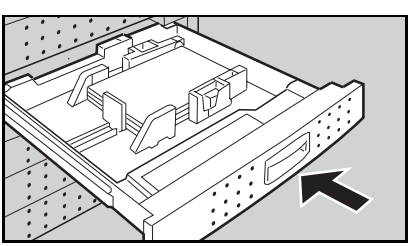
1 Pull out the paper tray until it stops.



2 Load paper in the paper tray. Do not stack paper above the limit mark inside the paper tray.



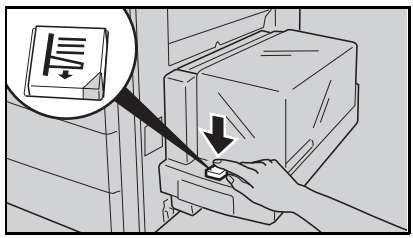
3 Push the tray in until it stops.



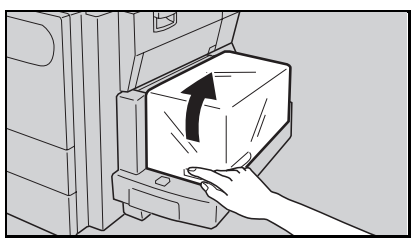
Loading Paper In The Large Capacity Tray

1 If the **Down** key is not lit, press it to lower the bottom plate. The key will blink while the bottom plate is moving down.

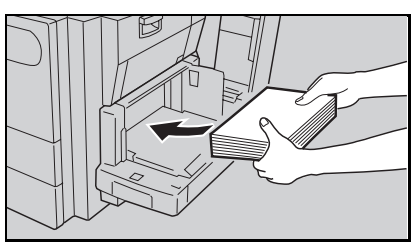
❒ If the key is lit or blinking, proceed to step **2**.



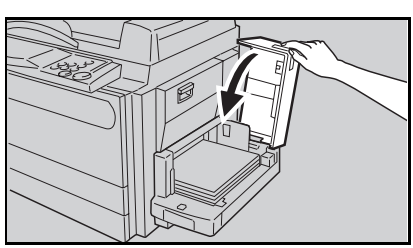
2 After the **Down** key stops blinking and lights, open the cover.



3 Load paper into the tray (not more than 1,000 sheets). The paper stack must be flush with the left side.



4 Close the cover.



ADDING TONER

When "**Add Toner**" is displayed on the display, it is time to supply toner.

⚠WARNING: Do not incinerate the used toner bottle. Toner bottle might ignite when exposed to open flame.

⚠WARNING: Dispose of the used toner bottle according to your local regulations.

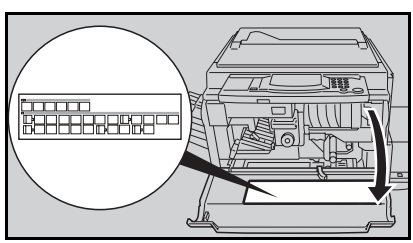
NOTE: When adding toner, do not turn off the main switch. If you do, your copy settings are cleared.

NOTE: Before setting the new toner bottle, shake it well at least 5 or 6 times.

NOTE: Do not remove the toner cap of the new toner bottle.

1 Open the front cover of the machine.

2 You can find the sticker (with at the top) explaining how to add toner, inside the front cover as shown in the illustration.

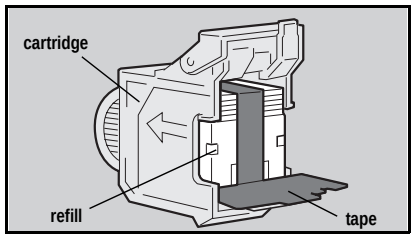


3 Load the new toner bottle following the instructions on the sticker.

ADDING STAPLES

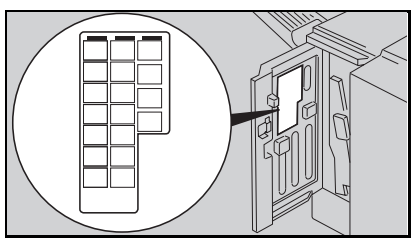
When "**Add Staples**" is displayed, add staples as follows:

❒ Do not remove the tape before setting the new staple refill in the cartridge. If you do, the staples fall into pieces.



1 Open the front door of the finisher.

2 You can find a sticker (with at the top) explaining how to add a staple cartridge, inside the front door as shown in the illustration.



3 Add the new staple cartridge following the instructions on the sticker.

❒ After adding the new staple, several pages will be printed without stapling.

CLEARING MISFEEDS

WARNING: ***Since some parts of the machine are supplied with high electrical voltage, touch only the parts specified in the instructions on the sticker inside the machine's cover.***

WARNING: ***When removing misfed paper from sections B and C, use caution. The fusing unit may be very hot. See page 4 for the position of the fusing unit.***

⚠CAUTION: Do not leave any torn scraps within the machine.

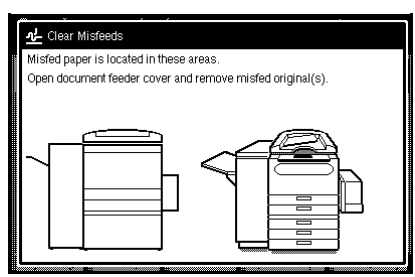
NOTE: When clearing misfeeds, make sure that all units and levers are returned to their original positions and all covers are closed.

NOTE: Do not touch originals in the optional document feeder when a paper misfeed occurs in the machine. If you do, the machine eill not know which originals have been copied and which should be copied.

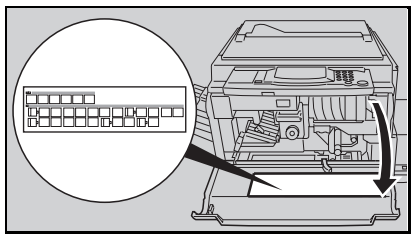
Check The Display

The display shows the location of misfed paper. Remove them following instructions.

- ❒ **P** is indicated only when your machine is equipped with the optional document feeder.
- ❒ Right figure shows when your machine is equipped with the optional Finisher and Document Feeder.

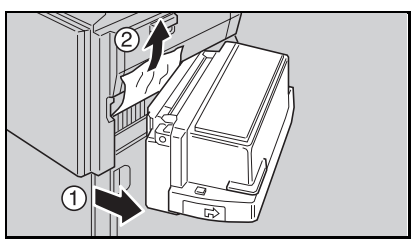


Misfeeds In A, B, C, Y, Or Z Sections



1. Open the front cover of the machine.
2. You can find a sticker (with ⚡ at the top) explaining how to remove misfed paper, inside the front cover as shown in the illustration.
3. Remove misfed paper following the instructions on the sticker.

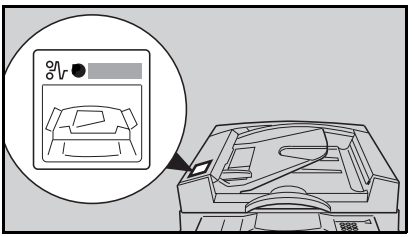
Misfeed In The Large Capacity Tray



1. Swing out the tray grasping the tray handle, and remove any misfed paper.
2. Return the tray to its original position.

Misfeeds In P Section

1. You can find a sticker, explaining how to remove the misfed paper, on the optional document feeder as shown in the illustration.

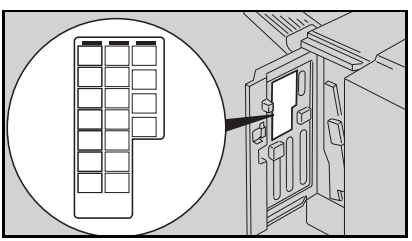


2. Remove the misfed original referring to the sticker.

Misfeeds In R Section

When The Optional Finisher Is Installed

1. Open the front door of the optional finisher.



2. You can find a sticker (with ⚠ at the top) explaining how to remove misfed paper, inside the front door as shown in the illustration.

3. Remove misfed paper following the instructions on the sticker.

When The Optional 3-bin Sorter Is Installed

1. You can find a sticker, explaining how to remove the misfed paper, on the optional 3 bin sorter.

2. Remove the misfed paper referring to the sticker.

REMOVING JAMMED STAPLES

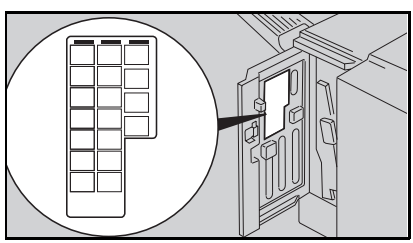
When "**Check Staple Unit**" is displayed, staples are jammed in the optional finisher. Follow these steps to solve the problem.

WARNING: ***Since some parts of the finisher are supplied with high electrical voltage, touch only the parts specified in the instructions on the sticker inside the finisher's cover.***

❒ After loading a new staple cartridge, staples might not be ejected the first few times you try to use the stapler.

1 Open the front door of the optional finisher.

2 You can find a sticker (with at the top) explaining how to remove jammed staples, inside the front door as shown in the illustration.



3 Remove jammed staples following the instructions on the sticker.

CHANGING SETTINGS

CHANGING THE PAPER SIZE

Changing The Paper Size In The 1st Tray

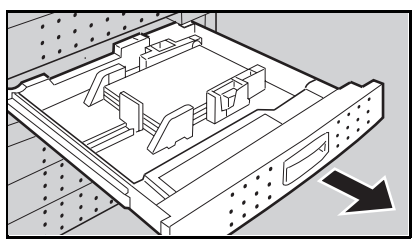
Standard Size Paper

❒ You can select paper of the following sizes:

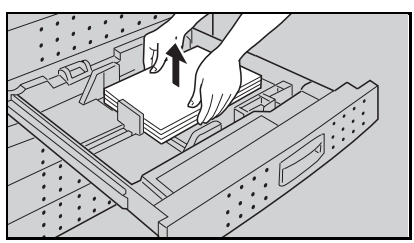
Metric version	Inch version
A3 ▭, B4 ▭, A4 ▯ ▭, B5 ▯ ▭, A5 ▯ 8 1/2" x 11" ▯ ▭	11" x 17" ▭, 8 1/2" x 14" ▭, 8 1/2" x 11" ▯ ▭, 5 1/2" x 8 1/2" ▯*, A3 ▭, A4 ▯ ▭, A5 ▯

*: 5 1/2" x 8 1/2" : is not available when using 3 bin sorter.

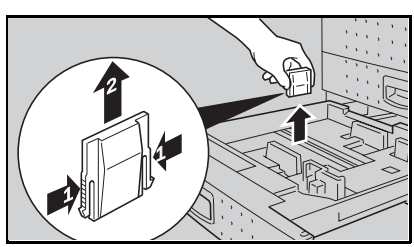
1 Pull the paper tray out until it stops.



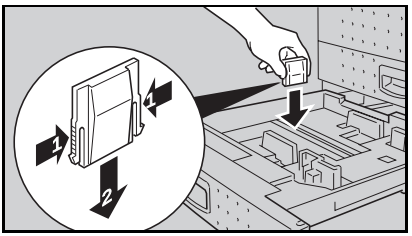
2 Remove the copy paper.



3 Remove the left guide as shown in the illustration.

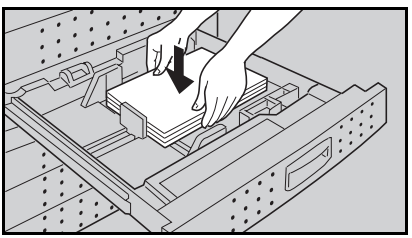


4 Set the left guide to the paper size you want to use as shown in the illustration.

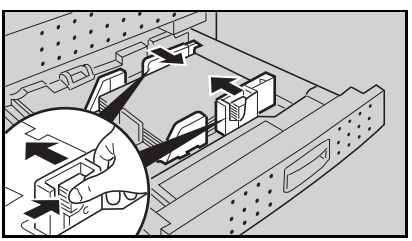


5 Load paper in the tray.

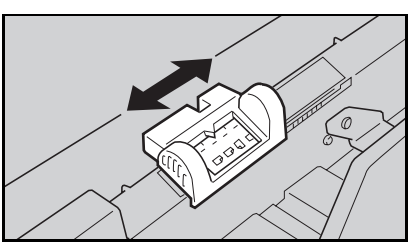
❒ Do not stack paper over the limit mark.



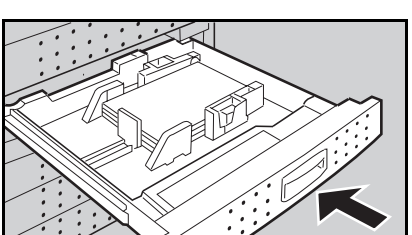
6 While pressing the release lever on the front guide, slide the front and rear guides to the paper size you want to use.



7 Select the paper size by adjusting the paper size selector on the back side of the tray.



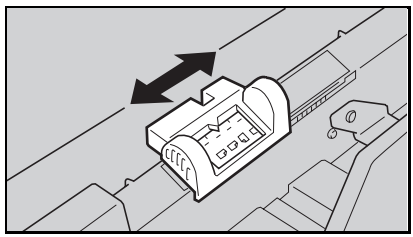
8 Push the paper tray in until it stops.



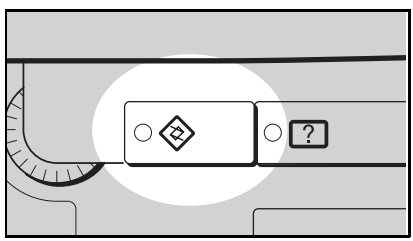
F/F4 Size Paper (8" x 13", 8 1/4" x 13", or 8 1/2" x 13)

1. Follow steps 1 to 6 on pages 38 and 39.

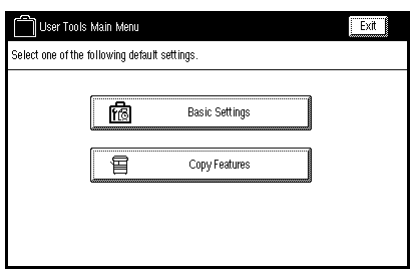
2. Select "F/F4" by adjusting the paper size selector on the back side of the tray.



3. Press the **User Tools** key.



4. Touch the **[Basic Settings]** key.



5. Touch the **[Next]** key three times to reach the paper size setting menu.

6. In the "Tray 1 <F/F4> Paper Size Setting" menu, the present size setting is displayed. Touch the **[Change]** key. Select the new paper size by touching a key. Then, touch the **[Exit]** key.

7. Press the **User Tools** key, then push the paper tray in until it stops.

Special Size Paper

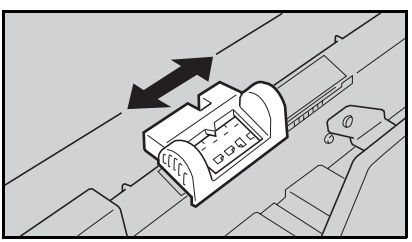
❒ You can select paper of the following sizes:

Metric version	Inch version
11" x 17" ⊐, 8 1/2" x 14" ⊐, 5 1/2" x 8 1/2" ⊐*, 8" x 10" ⊐	11" x 15" ⊐, 10" x 14" ⊐, 8" x 10 1/2" ⊐, 8" x 10" ⊐, B4 ⊐

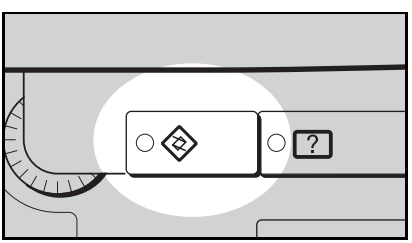
*: When using 3-bin sorter, 5 1/2" x 8 1/2" : is not displayed.

1 Follow steps 1 to 6 on pages 38 and 39.

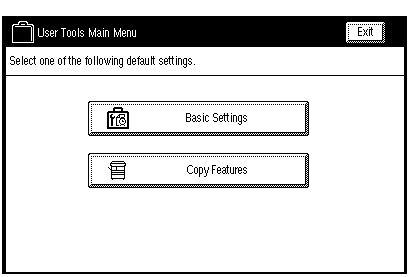
2 Select * by adjusting the paper size selector on the back side of the tray.



3 Press the **User Tools** key.



4 Touch the **[Basic Settings]** key.



5 Touch the **[Next]** key three times to reach the paper size setting menu.

6 In the "Tray 1 <*> Paper Size Setting" menu, the present size setting is displayed. Touch the **[Change]** key. Select the new paper size by touching a key. Then, touch the **[Exit]** key.

❒ "*" (asterisk) is displayed on the key for paper sizes that cannot be detected in some modes (ex. Auto Paper Select).

7 Press the **User Tools** key, then push the paper tray in until it stops.

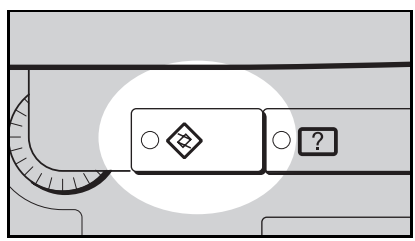
Changing The Paper Size In The Optional Tray Unit (Trays 2, 3, and 4)

❒ You can select paper of the following sizes:

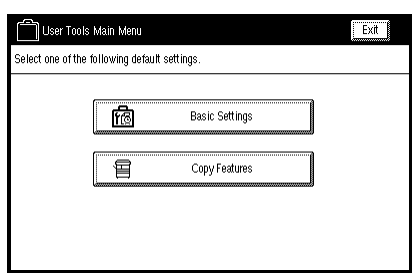
Metric version	Inch version
A3 ▭, B4 ▭, A4 ▯ ▭, B5 ▯ ▭ 11" x 17" ▭ , 8 1/2" x 14" ▭, 8 1/2" x 11" ▯ ▭, 8" x 10" ▭, 8" x 13" ▭, 8 1/2" x 13" ▭, 8 1/4" x 13" ▭	11" x 17" ▭, 8 1/2" x 14" ▭, 8 1/2" x 11" ▯ ▭, 11" x 15" ▭, 10" x 14" ▭, 8" x 10 1/2" ▭, 8" x 10" ▭, A3 ▭, B4 ▭, A4 ▯ ▭, 8" x 13" ▭, 8 1/2" x 13" ▭, 8 1/4" x 13" ▭

1 Follow steps 1 to 6 on pages 38 and 39.

2 Press the **User Tools** key.



3 Touch the **[Basic Settings]** key.



4 Touch the **[Next]** key three times to reach the paper size setting menu.

5 Find the paper tray (2, 3, or 4) and touch the **[Change]** key. Select the new paper size by touching a key. Then, touch the **[Exit]** key.

6 Press the **User Tools** key, then push the paper tray in until it stops.

USER TOOLS

This section is for operators in charge of this machine. The User Tools allow access to advanced settings.

User Tools Menu

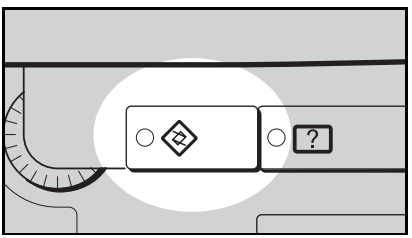
Basic Settings

Menu
Auto Response (Human) Sensor
Operation panel beeper
Copy count display
Set date
Set time
Auto Reset
Low Power Timer
Auto Off Timer
Paper Type Display (for each tray)
Tray 1 <*> Paper Size Setting
Tray 1 <F/F4>Paper Size Setting
Paper Size Setting (for tray 2, 3, and 4 (option))
Paper Tray Priority
Original: <F/F4> Size Setting
ADF: Thin Paper Mode
Auto Tray Switching
Set User Code(s)
Output Trays
Function Timeout

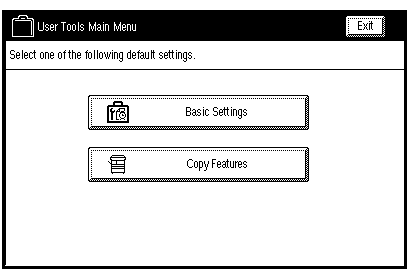
How To Change The Basic Settings

1 Confirm that the machine is in the initial condition. If not, press the **Clear Modes/Low Power Mode** key.

2 Press the **User Tools** key.



3 Touch the **[Basic Settings]** key.



4 Select the desired settings following the instruction on the display.

❒ **[▼Next]** : Use to go to the next page.
[▲Prev.] : Use to go back to the previous page.
[Exit] : Touch this key after entering the new data.
In the "User Tools Main Menu", touch to exit the User Tools condition.
[Cancel] : Touch to return to the previous menu without changing any data.
[Menu] : Use to go back to the previous menu.

5 To return to the initial condition, press the **User Tools** key.

Basic Settings

MENU	DESCRIPTION
Auto Response (Human) Sensor	When the auto response sensor does not detect anyone operating the machine for a while, it will switch to one of the Reset modes (Auto Reset, Low Power mode, Auto Off, or SADF Auto Reset). You change the delay before this cuts in. ❒ Default: Yes (On)
Operation panel beeper	The noise made when you push a button can be tumed off. ❒ Default: On
Copy count display	The copy counter can be set to show the number of copies made (count up) or the number of copies remaining to be made (count down). ❒ Default: Up (count up)
Set date **Set time**	Use to set the date and copier's internal clock. ❒ Date Stamping uses this date. ❒ Remember to adjust the clock for Daylight Saving Time.
[▼ Next]	
Auto Reset	The machine returns to standby automatically a while after every job. You can change the delay from 0 (no Auto Reset) to 180 seconds. ❒ Default: 30 seconds
Low Power Timer	[U.S. model] The copier will automatically enter a Low Power condition after the selected time after the last copying job has been completed. This time can be set from 1 to 120 minutes in 1 minute steps. ❒ Default: 15 minutes ❒ The operator can activate the Low Power mode by pressing the Clear Modes/Low Power Mode key for more than one second. ❒ Time required to return to a ready condition from the Low Power mode is less than 30 seconds. ❒ In this mode, power consumption is reduced from less than 0.20 kW (standby) to less than 0.11 kW [Europian model] The copier will automatically enter a Low Power mode while after the last job has been completed. You can change the delay from 0 (Low Power mode off) to 180 seconds. ❒ When "0" is set, the machine does not enter a Low Power mode.

Auto Off Timer	To conserve energy, this copier automatically tums off 60 minutes after the last copying job has been completed. This time can be set from 10 to 120 minutes in 10 minutes steps. ❒ Default: 60 minutes ❒ To exit Auto Off mode, turm on the main switch. The main switch for this copier has three positions, press it all the way, and hold for 1 - 2 seconds. ❒ In Auto Off mode, power consumption is reduced from less than 0.20kW (standby) to less than 0.04W. ❒ This function is available when using the machine as a copier.
Output Trays	Copy output tray and printer output tray can be select. ❒ This function is available when the 3-bin sorter is equipped.
Function Timeout	0 to 180 seconds (step 10 seconds) can be selected. ❒ Default: 30 seconds

(Basic Settings)

MENU	DESCRIPTION
	[▲ Prev.] [▼ Next]
Paper Type Display	When recycled paper or special paper is in the paper trays, you can have the paper type shown on the display. ❒ Default: No display ❒ You cannot select both recycled paper and special paper in the same tray.
	[▲ Prev.] [▼ Next]
Tray 1 <*> Paper Size Setting	If you want to use a special paper size, you can select Tray 1 for this purpose. ❒ Default: Metric version: 11" x 17" Inch version: 10" x 14" ❒ For paper sizes that can be selected, ☛ see page 41. ❒ Make sure you select * by adjusting the paper size selector on the back side of the tray. ❒ * (asterisk) is displayed on paper size keys that cannot be used by Auto Paper Select.
Tray 1 <F/F4> Paper Size Setting	Select if you want to use 8 1/2" x 13, 8" x 13", or 8 1/4" x 13" paper for the 1st tray. ❒ Default: 8 1/2" x 13 ❒ For more details ☛ see page 40. ❒ Make sure you select F/F4 by adjusting the paper size selector on the back side of the tray.
Paper Size Setting Tray 2, 3, and 4 (option)	Use to change the paper sizes in the optional tray unit. ❒ Default: Metric version: A4 ▯ Inch version: 8 1/2" x 11" ▯ ❒ Make sure you change the paper size setting, when changing the paper size in these trays otherwise a misfeed might occur. ❒ Also be sure to select the paper size when installing the optional tray unit.
	[▲ Prev.] [▼ Next]

(Basic Settings)

MENU	DESCRIPTION
	[▲ Prev.] [▼ Next]
Paper Tray Priority	❒ You can choose the tray which will be active under the following conditions: ♦ when the main switch is turned on. ♦ after Auto Reset or Low Power mode ♦ after pressing the Clear Modes/Low Power Mode key (* If "Auto Tray Switch" is on, these are valid in printer mode.) ❒ Default: Tray T (1000-sheet large capacity tray) ❒ This function is available, when using the machine as a copier.
Original: <F/F4> Size Setting	You can select one of the following original sizes to be detected in the Auto Paper Select and Auto Reduce/Enlarge modes as F size. 8 1/2" x 13, 8 1/4" x 13", or 8" x 13" ❒ Default: 8 1/2" x 13"
ADF: Thin Paper Mode	Use when changing the type of originals to be fed into the optional document feeder. Select when you use thin originals (40 ~ 52 g/m^2 or 11 ~ 14 lb). ❒ Default: Normal (Not Thin)
Auto Tray Switching	If you load paper of the same size and in the same direction in two or more trays, the copier automatically shifts to another tray when the tray in use runs out of paper. You can cancel this setting. * If "Auto Tray Switch" is on, these are valia in printer mode. ❒ Default: Yes ❒ Trays for special paper and recycled paper can be used only when the Special Paper Size setting is the same. ❒ This function is available, when using the machine as a copier.

(Basic Settings)

MENU	DESCRIPTION
	Set User Code(s) If User Codes are turned on, operators must input their user codes before using the machine. The machine keeps count of the number of copies made under each user code. To switch on this mode, utilize the "Set User Code Mode" User Tool and then contact your sales/service representative.
Check/Reset/Print Copy Counter	Use to check the number of copies made under each user code, clear each code's counter, clear all code's counters and print the counter data for all user codes.
User Code Register/Change/Delete	Use to register, change, delete one user code, or delete all user codes. ❒ Up to 20 user codes (6 digits) can be registered. ❒ When changing user codes, the number of copies made under the old code is added to that made under the new user code. ❒ When deleting user codes, the number of copies made under the deleted code is deleted. ❒ Registered codes will be sorted in numerical order.
Assign/Activate Key Operator Code	If you select **[Yes]**, only operators who know the key operator code can access User Tools from User Code mode. ❒ Default: No ❒ If you select **[Yes]**, you should register the key operator access code. ☛ Use the "Key Operator Code" menu.
Key Operator Code	Use to register or change the key operator code.
Set User Code Mode	Turn User Codes on or off. ❒ Default: No (not User Code mode) ❒ After select **[Yes]**, please contact your sales/service representative to set your machine to the User Code mode.
	[▲ Prev.]

SERVICE REPRESENTATIVE SETTINGS

Some features can be adjusted by your service representative to suit your needs. This section gives a brief description of these features. For more information, contact your service representative.

LCT Paper Size Change

The large capacity tray holds A4 ▯ (for the metric version) or 8 1/2" x 11" ▯ (for the inch version) copy paper. If you need, A4 ▯ can be set for the inch version, and 8 1/2" x 11" ▯ can be set for the metric version.

Auto Stamping (for metric version)

If your machine is the metric version, Auto Stamping cannot be used as a default setting. You can cancel this setting and use this function.

A3, 11" x 17" Double Count

When you use A3, 11" x 17" paper, your service representative can set the copier to count each A3, 11" x 17" as two copies.

Auto Image Density Level Selection

Auto Image Density level can be adjusted to lighter or darker.

APS A5/5 1/2" x 8 1/2" Detection

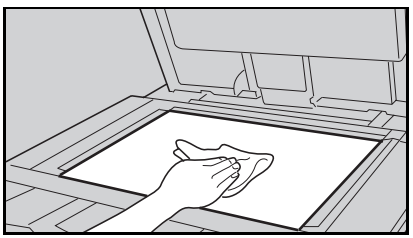
Your service representative can set the copier to detect the original size on the exposure glass as A5 ▭ (for metric version) or 5 1/2" x 8 1/2" ▭ (for inch version) whenever the copier cannot detect it with Auto Paper Select.

APPENDIX

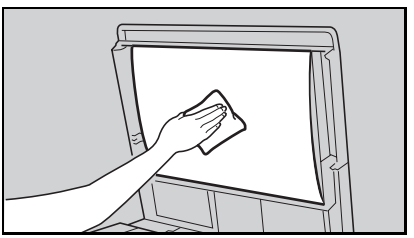
MAINTAINING YOUR MACHINE

To maintain high copy quality, clean the following parts and units regularly with a damp cloth and wipe them with a dry cloth.

Exposure glass

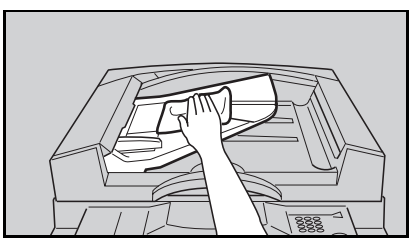


Platen cover

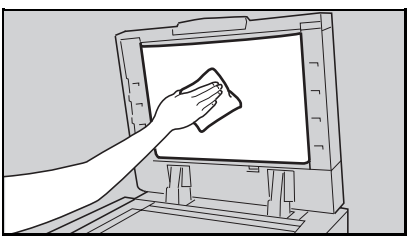


Document Feeder (Option)

Feed-in unit



Belt



DO'S AND DON'TS

General Operations

- ❒ When using the bypass tray, paper should be set in the bypass tray lengthwise (☞).
- ❒ Do not place sheets of paper or originals on the cover of the large capacity tray.
- ❒ Do not move the machine when the main switch is turned on.
- ❒ Do not move the machine a few minutes after the main switch is turned off.

When Adding Toner

- ❒ Do not incinerate toner or toner containers. Toner dust might ignite when exposed to open flame.
- ❒ Dispose of the used toner bottle according to local regulations.
- ❒ When adding toner, do not turn off the main switch. If you do, your settings are cleared.
- ❒ Before setting the new toner, shake it well, at least 5 or 6 times.
- ❒ Do not remove the inner cap of the new toner bottle.

When Removing Misfed Paper

- ❒ Since some parts of the machine are supplied with high electrical voltage, touch only the parts specified in the instructions on the sticker inside the machine's cover.
- ❒ When removing misfed paper from sections B and C, use cautions. The fusing unit may be very hot.
- ❒ Do not leave any torn scrapes within the machine.
- ❒ When clearing misfeeds, do not turn off the main switch. If you do, your machine settings are cleared.
- ❒ After clearing misfeeds, make sure that all units and levers are returned to their original positions and all covers are closed.

Document Feeder (Option)

- ❒ While originals are fed from the original table to the exposure glass, do not pull out the originals.
- ❒ Do not lift the document feeder until the last original has been completely fed out.
- ❒ Do not press down or hold originals after inserting them.
- ❒ Do not press any parts of the document feeder strongly.

Finisher (Option)

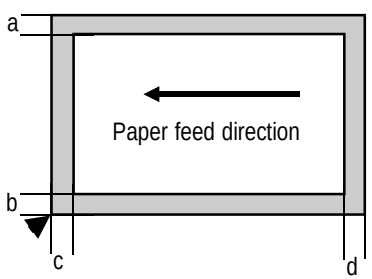
- ❒ Do not remove papers from the shift tray while copying/printing.

PAPER TIPS

- If you get a lot of misfeeds, try turning over the paper stack in the 500-sheet or large capacity tray. If there is no improvement, change to paper with less curl.
- Load paper with the copy/print side *down* in the 500-sheet trays, and with the copy/print side up in the large capacity tray. If papers are curled, try turning the copy/print paper over in the tray. If there is no improvement, change the copy/print paper with less curl.

SCANNABLE AREA

Leading and side edges of the original image are not copied/scanned.



a: 2 + 2.5 mm
   2 – 1.5 mm
b: 2 ± 1.5 mm
c: 3 ± 2 mm
d: 2 ± 2 mm

WHERE TO PUT YOUR MACHINE

Environment

The installation location should be carefully chosen because environmental conditions greatly affect the performance of a machine.

Optimum environmental conditions

- ❒ Temperature: 10 - 30 ^{o}C
- ❒ Humidity: 15 - 90 %
- ❒ A strong and level base.
- ❒ To avoid possible built-up of ozone, make sure to locate this machine in a large well ventilated room which has an air turnover of more than 30 m^3/hr./person.
- ❒ The machine must be level within 5 mm both front or rear and left to right.

Environments to avoid

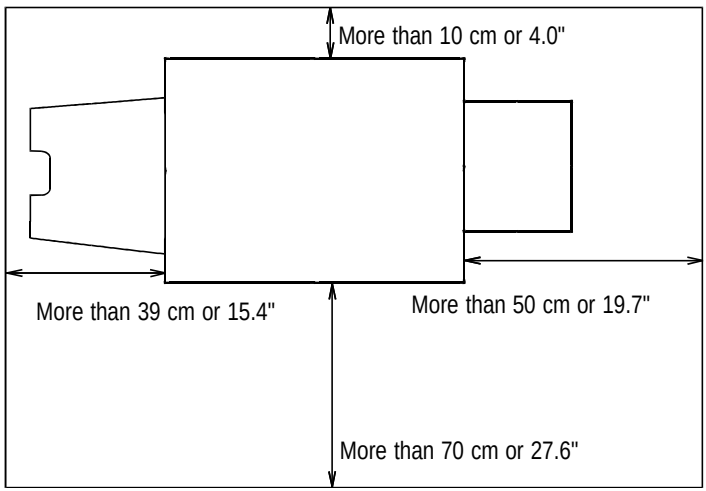
- ❒ Locations exposed to direct sunlight or strong light (more than 1,500 lux).
- ❒ Dusty areas.
- ❒ Areas with corrosive gasses.
- ❒ Places higher than 2,000 m above sea level.
- ❒ Places where the machine might be subjected to frequent strong vibration.
- ❒ Locations directly exposed to cool air from an air conditioner or heated air from a heater. (Sudden temperature changes might cause condensation within the machine.)

Power Connection

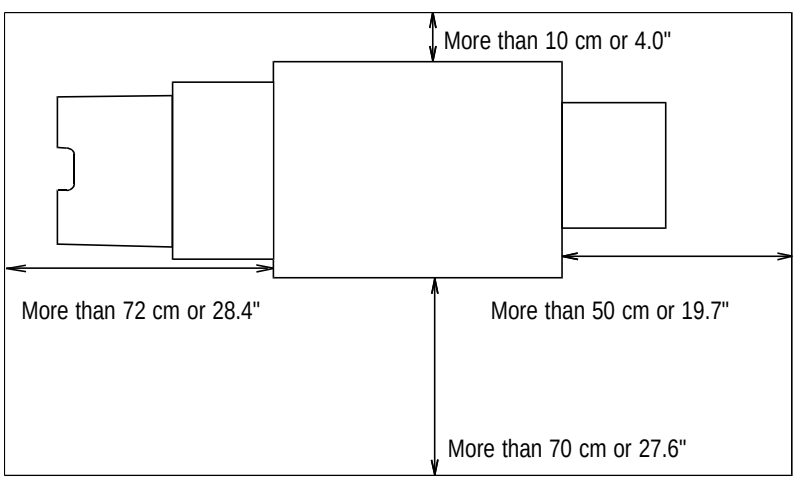
- ❒ Connect the machine to a power source meeting the specifications given on the inside from cover of this manual.
- ❒ Do not set anything on the power cord.
- ❒ Voltage must not fluctuate more than 10 %.
- ❒ Avoid multiwiring.
- ❒ Make sure that the wall outlet is near the machine and easily accessible.
- ❒ Make sure the plug is firmly inserted in the outlet.
- ❒ Always turn the machine off when you have finished using for the day, but leave it plugged in.

Access To The Machine

Place the machine near a power source, providing clearance as shown.



With the optional finisher



USE AND STORAGE OF SUPPLIES

Paper

- ❒ Paper of the types or in the conditions listed below are not recommended for this machine.
  - Folded, curled, creased, or damaged paper.
  - Torn paper
  - Damp paper
  - Perforated paper
  - Paper with conductive or low electrical resistance such as carbon or silver coating.
  - Wavy paper
  - Thermal paper, art paper
  - Thin paper that has low stiffness
- ❒ Use the bypass tray to copy/print onto OHP transparencies, adhesive labels, translucent paper, and post cards. Before making copies/prints onto them, read the following:
  - Adhesive labels should be fed from the bypass tray one sheet at a time.
  - OHP transparencies should be fed from the bypass tray. You can set ten sheets at a time. However, if misfeed or multi-feed occurs, set one sheet at a time.
  - OHP transparencies should be fanned to get air between the sheets before loading.
  - Translucent paper should be fed from the bypass tray.
  - Translucent paper should be fanned to get air between the sheets and any curls should be corrected before loading.
  - Post cards should be fed from the bypass tray.
  - It is recommended to feed one post card at a time.
  - Correct any curl in post cards before loading.
- ❒ For good copy/print quality, please use the type of OHP transparencies recommended by your sales and service representatives.
- ❒ When using the bypass tray, the large capacity tray cannot be used.
- ❒ Do not touch paper if your fingers are wet or oily; finger prints may appear on the copy/print.
- ❒ Do not use paper that has been already copied/printed on.
- ❒ Do not set paper over the limit mark inside the tray.
- ❒ To avoid problems caused by curly papres, try turning over the paper stack in the 500-sheet or large capacity tray. If there is no improvement, change to paper with less curl.
- ❒ Load paper with the copy side *down* in the 500-sheet trays, and with the copy side *up* in the large capacity tray. If copies are curled, try turning the copy paper over in the tray. If there is no improvement, change the copy paper with less curl.

Paper Storage

Paper should always be stored properly. Improperly stored paper might result in poor image reproduction, creased copies, or paper misfeeds. Generally, avoid curling and absorption of moisture.

- ❒ Avoid storing paper in humid areas. Under high temperature and high humidity, or low temperature and low humidity conditions, store paper in a vinyl bag.
- ❒ Do not store paper where it will be exposed to heat.
- ❒ Store on a flat surface.
- ❒ Use older stock first.
- ❒ Do not lay heavy objects on paper.
- ❒ Keep open reams of paper in the package, and store as you would unopened paper.

Toner Storage

- ❒ Store toner bottles vertically in a cool, dark place.
- ❒ Never store toner where it will be exposed to heat.
- ❒ Do not lay heavy objects on toner bottles.

SPECIFICATIONS

COPIER

Configuration:	Desktop
Process:	Dry electrostatic transfer system
Memory capacity:	approximately 1.7GB hard disk
Scanning method:	Flatbed solid state scanner
Resolution:	400 x 400 dpi
Gray scale:	256 levels
Originals:	Sheet, book
Original thickness:	less than 30 mm, 1.18"
Original size:	Maximum: A3, 11" x 17"
Copying speed:	40 copies/minute (A4 ▯, 8 1/2" x 11" ▯, in Full Size mode)
Warm-up time:	less than 140 seconds (20°C, 68°F)

* Refer the Copier Reference for details.

PRINTER

Resolution:	300, 400*, 600 dpi (* 400dpi is available only when using the Postscript.)
Speed:	40 ppm (300dpi), 20ppm (600dpi)
Interface:	Standard Centronics compatible Standard RS232C
Options:	1000 sheet tray unit 1500 sheet tray unit Finisher bin 3-bin sorter Network Interface Card (Ether Net, Token Ring) Postscript Kit

* Refer the Printer Reference for details.

SCANNER

Resolution: 400 dpi (100 to 1600 dpi internal conversion)

Grayscale: 256 levels

Interface: SCSI 2

* Refer the Scanner Reference for details.

GENERAL

Power consumption:

	Copier only	Full system*
Warm-up	less than 0.88 kW	less than 0.90 kW
Stand-by	less than 0.20 kW	less than 0.22 kW
Maximum	less than 1.50 kW	less than 1.50 kW

* Full system: copier with document feeder, finisher, and paper tray unit

Noise emission:

Sound pressure level (The measurements are made according to ISO 7779 at the operator position)

Dimensions:

	Width	Depth	Height
with platen cover, copy tray, and paper tray unit	1,150 mm 45.3"	655 mm 25.8"	1,024 mm 40.4"
with document feeder, finisher, and paper tray unit	1,551 mm 61.1"	655 mm 25.8"	980+130mm 43.8"
with document feeder, 3-bin sorter, and paper tray unit	1,300 mm 51.2"	655 mm 25.8"	1,110 mm 43.8"

Weight:

with platen cover, copy tray, and 1500-sheet paper tray unit	137.5 kg 303.2 lb
with document feeder, finisher, and 1500-sheet paper tray unit	178.5 kg 393.6 lb
with document feeder, 3-bin sorter, and 1500-sheet paper tray unit	161.0 kg 355.0 lb

❒ Specifications are subject to change without notice.

DOCUMENT FEEDER (OPTION)

Original feed:

Automatic reverse document feed (ARDF)
two-sided originals mode
Automatic document feed (ADF)
one-sided originals mode
Semi-automatic document feed (SADF)
Single copies mode

Original size & weight:

Number of originals to be set:

Paper weight (g/m^2)		40	47	53	64	81	105	128
Paper weight (lb)		11	12.5	14	17	22	28	34
Maximum number of originals to be set		50	50	50	50	50	30	25
A3	lengthwise	☆	☆	❍	❍	❍	❍	☆
A4	lengthwise	☆	☆	❍	❍	❍	❍	☆
	sideways	☆	☆	●	●	●	●	★
A5	lengthwise	☆	☆	❍	❍	❍	❍	☆
	sideways	☆	☆	●	●	●	●	★
B4	lengthwise	☆	☆	❍	❍	❍	❍	☆
B5	lengthwise	☆	☆	❍	❍	❍	❍	☆
	sideways	☆	☆	●	●	●	●	★
B6	lengthwise			☆	☆	☆	☆	☆
	sideways	☆	☆	★	★	★	★	★

●: ARDF (2 sided originals), ADF (1 sided originals), SADF, Single copies mode
❍: ARDF, ADF, SADF
★: ADF, SADF, Single copies mode
☆: ADF, SADF

Original set: Copier: Face up, first sheet on top
Scanner: Face up/down

Original transport: One flat belt

Power consumption: DC 24V ± 10 % (from copier)

Power consumption: 45 W

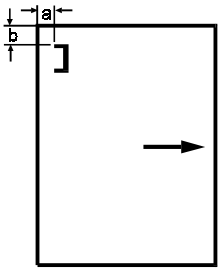
Weight: Approximately 10.5 kg, 23.2 lb

Dimensions (W x D x H): 610 x 507 x 130 mm, 24.1" x 20.0" x 5.2"

❒ Specifications are subject to change without notice.

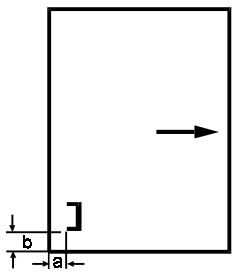
FINISHER (OPTION)

Top



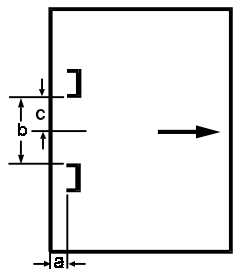
a= 6 ± 3 mm
b= 6 ± 3 mm

Bottom



a= 6 ± 3 mm
b= 6 ± 3 mm

2 Staples



a= 6 ± 3 mm
b= 132 ± 2 mm
c= 66 ± 3 mm

Staple replenishment:	Cartridge exchange (5,000 pieces/cartridge)
Power source:	DC 24V (from the main body)
Power consumption:	48 W
Weight:	35 kg, 77.2 lb
Dimensions (W x D x H):	671 x 514 x 950 mm, 26.5" x 20.3" x 37.5"

❒ Specifications are subject to change without notice.

3-BIN SORTER

Paper capacity:	1st bin: 500 sheets (A4, 80g/m^2) 2nd bin: 250 sheets (A4, 80g/m^2) 3rd bin: 250 sheets (A4, 80g/m^2)
Power consumption:	30 W
Power source:	DC 24V, DC5V (from the main body)
Dimensions (W x D x H):	468 x 483 x 490 mm, 18.5" x 19.1" x 19.4" (maximum)
Weight:	13 kg

❒ Specifications are subject to change without notice.

1000-SHEET TRAY UNIT (OPTION)

Paper size:	☛ See page 43.
Paper weight:	52 - 105 g/m^2 (14 lb - 28 lb)
Paper capacity:	1,000 sheets (500 sheets (80 g/m^2) for each tray)
Power source:	DC 24V, 5V, AC 120V (from copier)
Power consumption:	Average: less than 50 W (copying) Maximum: less than 110.5 W (copying)
Weight:	Approximately 36 kg, 79.4 lb
Dimensions (W x D x H):	620 x 632 x 390 mm, 24.5" x 24.9" x 15.4"

❒ Specifications are subject to change without notice.

1500-SHEET TRAY UNIT (OPTION)

Paper size:	☛ See page 43.
Paper weight:	52 - 105 g/m^2 (14 lb - 28 lb)
Paper capacity:	1,500 sheets (500 sheets (80 g/m^2) for each tray)
Power source:	DC 24V, 5V, AC 120V (from copier)
Power consumption:	Average: less than 50 W (copying) Maximum: less than 110.5 W (copying)
Weight:	Approximately 38 kg, 83.8 lb
Dimensions (W x D x H):	620 x 632 x 390 mm, 24.5" x 24.9" x 15.4"

❒ Specifications are subject to change without notice.

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INTRODUCTION

This manual contains detailed instructions on the operation and maintenance of this copier. To get maximum versatility from this copier all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

Please read the "SAFETY INFORMATION" section in the "General Reference" before using this machine. It contains important information related to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS.

WHERE IS IT & WHAT IS IT

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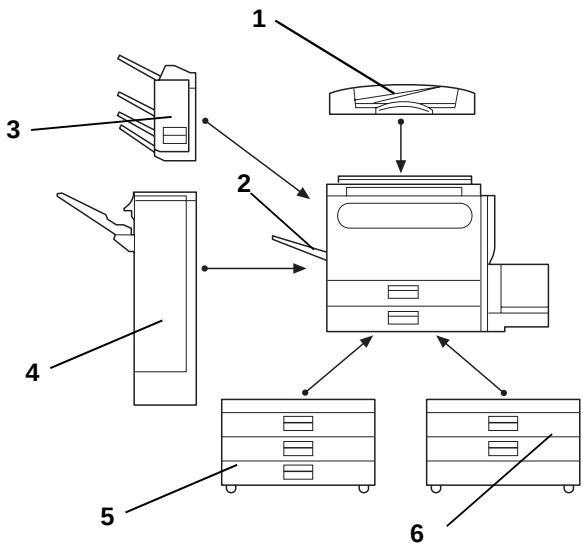
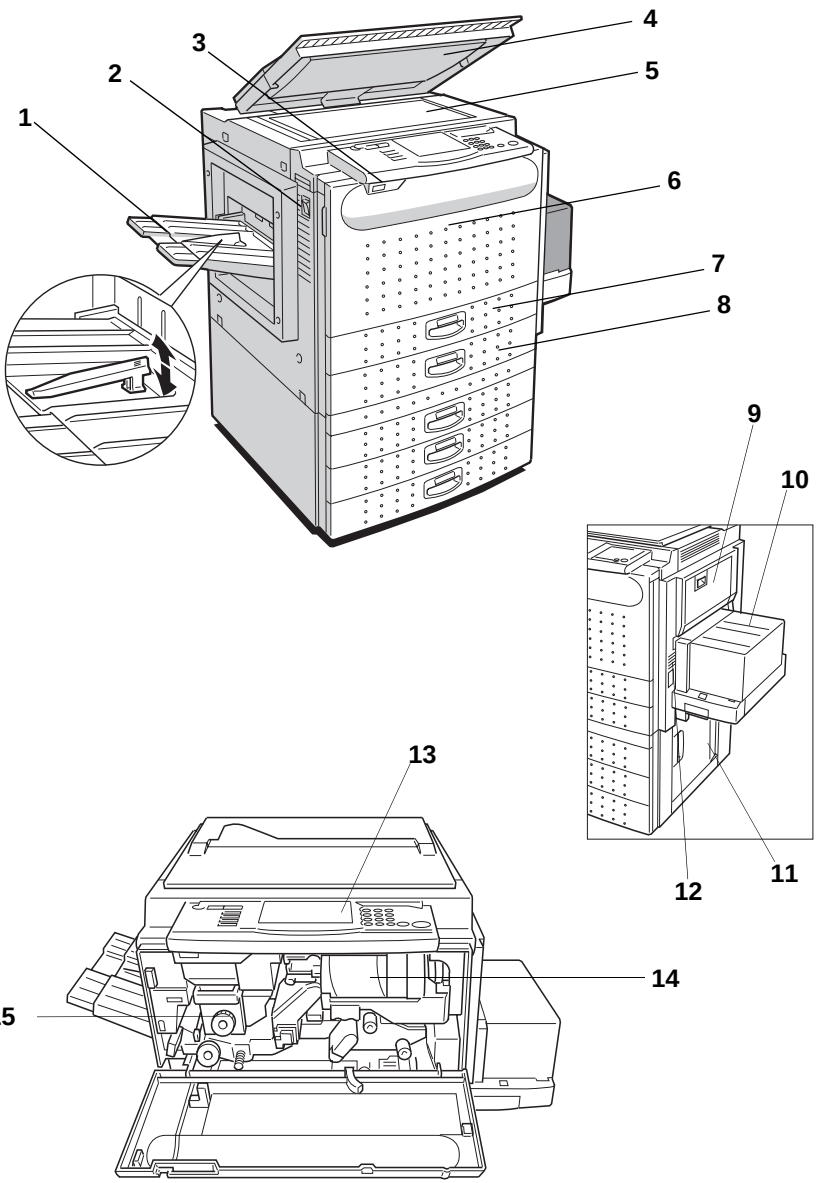
SYSTEM OVERVIEW (For Copy Mode)



1. Document feeder (Option)	Insert a stack of originals here. They will be fed automatically.
2. Copy tray (Option)	Completed copies are delivered here.
3. 3-Bin Sorter (Option)	Sorts, stacks copies.
4. Finisher (Option)	Sorts, stacks, and staples copies.
5. 1500-sheet tray unit (Option)	Holds 1500 sheets of copy paper.
6. 1000-sheet tray unit (Option)	Holds 1000 sheets of copy paper.

- ❒ Other options for Copy mode: platen cover, key counter, and copy tray
- ❒ Regarding other options for Printer/Scanner mode, ☛ see the "General Reference".

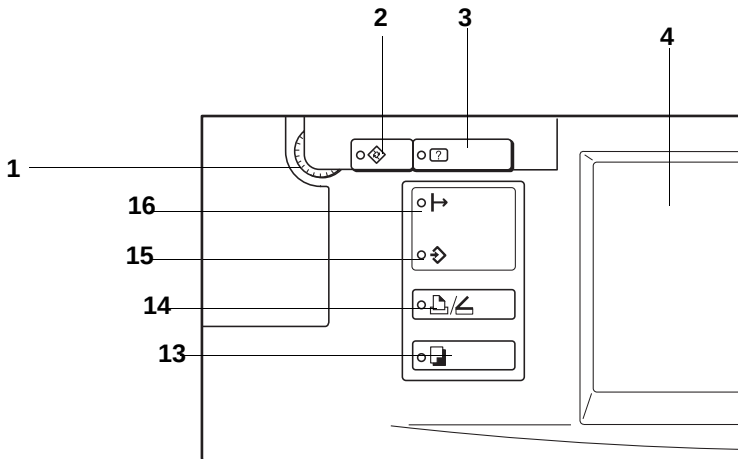
COPIER EXTERIOR & INTERIOR



1. Copy tray (option)	Completed copies are delivered here. Regarding the capacity of the tray, ☛ see page 130.
2. Main switch	Switches the copier between on and standby conditions.
3. Auto response (human) sensor	When someone comes close to the copier, it will automatically switch from Low Power mode to standby mode.
4. Platen cover (option)	Lower this cover over originals for copying.
5. Exposure glass*	Position originals here face down for copying. *After turning off the main switch, the exposure glass might be hot because of the anticondensation function. This is not a problem.
6. Front cover	Open to access the inside of the copier.
7. Unit for two-sided copies (Duplex unit)	Makes two-sided copies.
8. Paper tray	Holds 500 sheets of copy paper.
9. Bypass tray	Use to copy onto OHP sheets, adhesive labels, translucent paper, post cards, and non-standard size paper.
10. Large capacity tray	Holds 1,000 sheets of copy paper.
11. Right cover of the optional tray unit	Open to remove misfed paper.
12. Key counter holder	Insert the optional key counter here.
13. Operation panel	Operator controls and touch panel are located here. ☛ See the next page.
14. Toner bottle	Replace the toner bottle when " Add Toner" is displayed on the display. ☛ See "ADDING TONER" in the "General Reference".
15. Fusing unit	Fuses the copy image to the paper. When accessing the inside of the copier, use caution. This unit may be very hot.

OPERATION PANEL

Hard Keys



1. Contrast Dial
Changes the brightness of the display.

2. User Tools key
Changes the basic settings and copy features.
☛ See page 114.
☛ See "CHANGING THE MACHINE'S SETTINGS" in the "General Reference".

3. Guidance key
Shows guidance for functions.
☛ See page 26.

4. Touch Panel Display
☛ See pages 8 and 24.

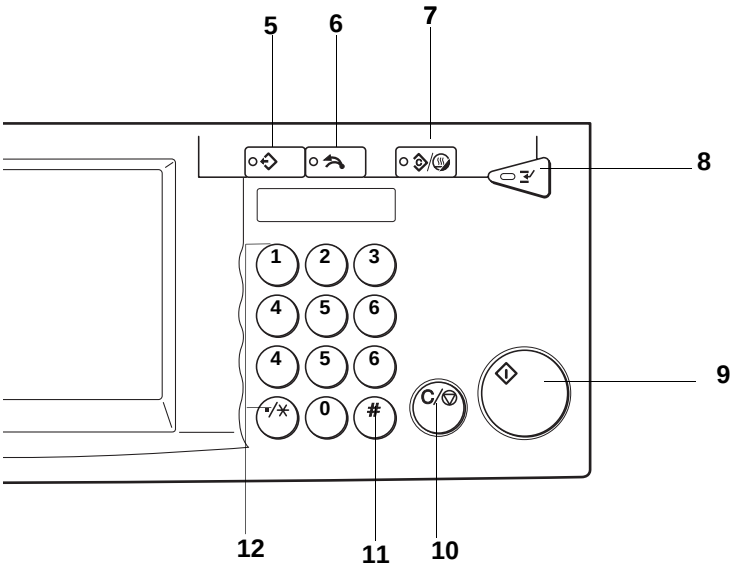
5. Program key
Press to select the program mode.
☛ See page 52.

6. Job Recall key
Use to recall your previous copy settings. ☛ See page 51.

7. Clear Modes/Low Power Mode key
Press to clear the previously entered copy job settings. Also use to switch to and from Low Power mode. ☛ See "STARTING THE MACHINE" in the "General Reference".

8. Interrupt key
Press to make interrupt copies during a copy run.
☛ See page 51.

9. Start key
Press to start copying. Use to set the Auto Start. ☛ See page 36.



10. Clear/Stop key
While entering numbers, press to cancel a number you have entered. While copying, press to stop copying.

11. Enter key
Use to enter data in selected modes.

12. Number keys
Use to enter the desired number of copies and data for selected modes.

13. Copy key
Use to enter the Copy mode from Printer/Scanner mode.
☛ See page 34.
☛ See "SWITCHING BETWEEN THE PRINTER, COPIER AND SCANNER FUNCTIONS" in the "General Reference".

14. Printer/Scanner key
Use to enter the Printer/Scanner mode from the Copy mode.
☛ See "SWITCHING BETWEEN THE PRINTER, COPIER AND SCANNER FUNCTIONS" in the "General Reference".

15. Data in indicator
☛ See the "Printer Reference".

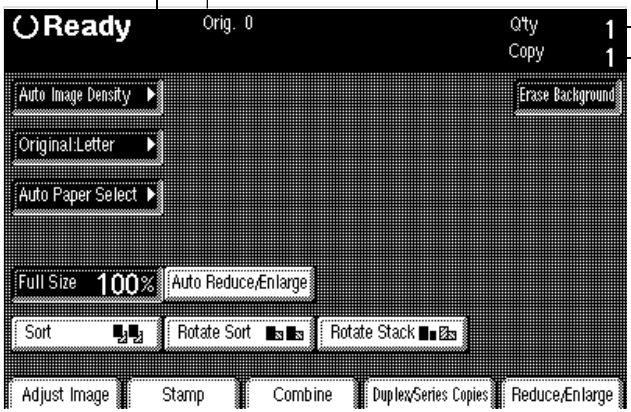
16. On line indicator
☛ See the "Printer Reference".

Touch Panel Display

with optional copy tray & with optional 3-bin sorter

Message area
Copier status and messages

Original Counter
Number of originals scanned so far.



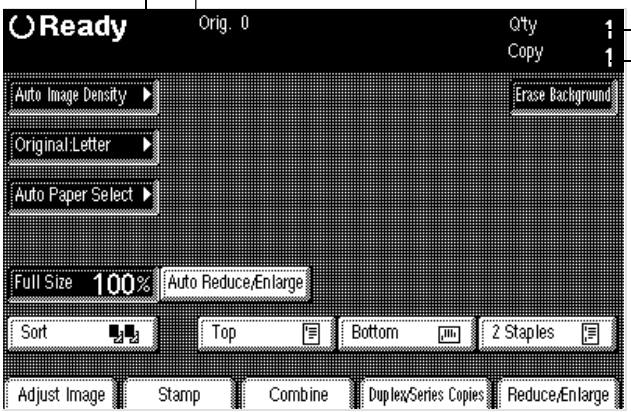
Copy Set Total
Total number of copy sets entered.

Copy Set Counter
Number of copy sets made so far.

with optional finisher

Message area

Original Counter



Copy Set Total

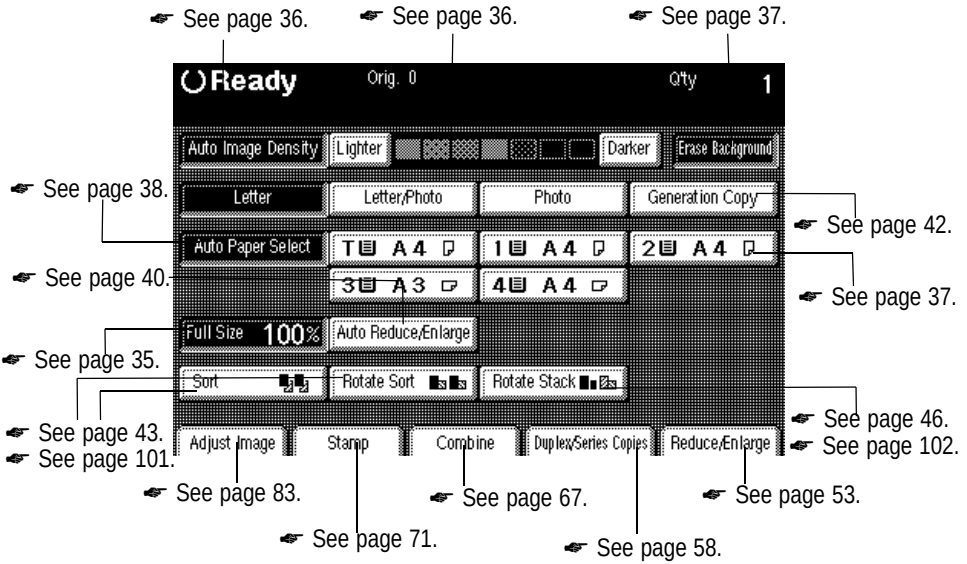
Copy Set Counter

- Regarding detailed information about each key and its functions, ☛ see page 11.
- For how to use the touch panel display, ☛ see page 24.

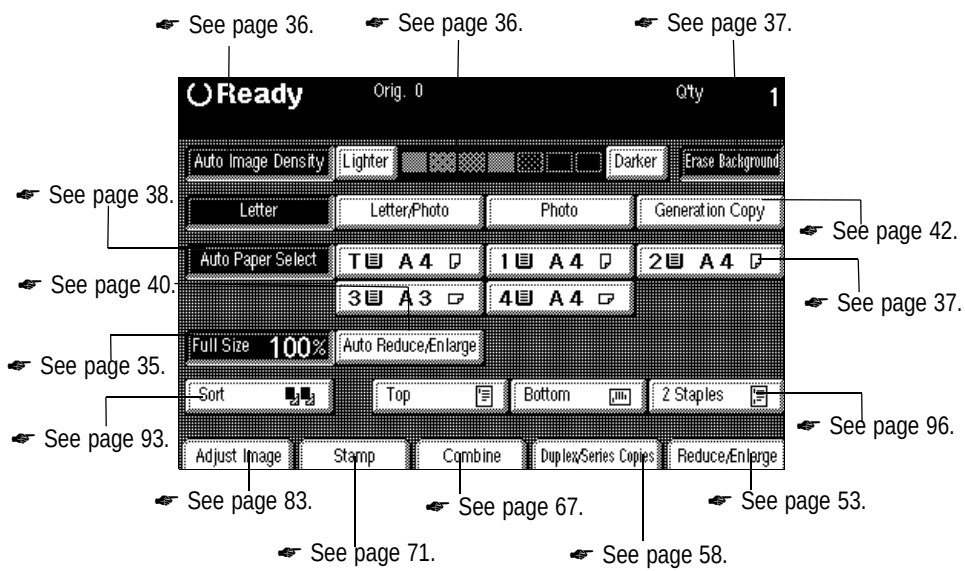
WHAT YOU CAN DO WITH THIS COPIER

FUNCTIONS

with optional copy tray & with optional 3-bin sorter



with optional finisher



Getting Help On The Display

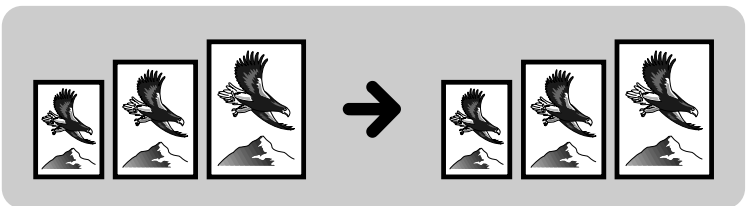
☛ See page 26.

Adjusting Copy Image Density

☛ See page 36.

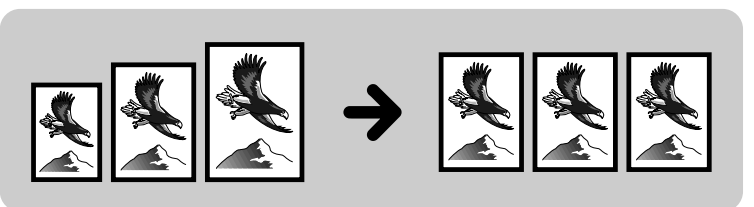
Having The Copier Choose The Paper Size

☛ See page 38.



Having The Copier Choose The Reproduction Ratios

☛ See page 40.

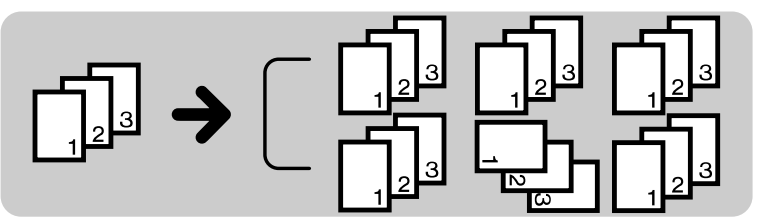


Selecting Original Type Setting

☛ See page 42.

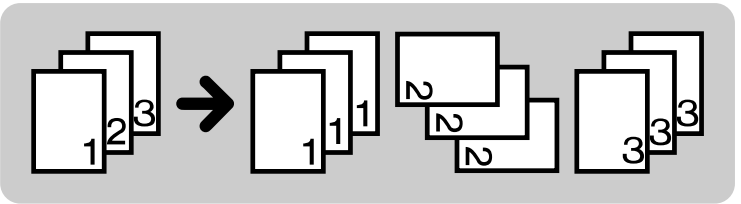
Sorting Into Sets

☛ See page 43.



Stacking Together All Copies Of A Page

☛ See page 46.



Copying From The Bypass Tray

☛ See page 48.

Temporarily Stopping One Job To Copy Something Else

☛ See page 51.

Recalling Job Settings

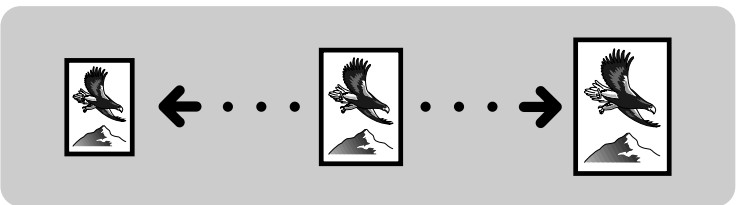
☛ See page 51.

Storing Your Copy Settings In Memory

☛ See page 52.

Reducing And Enlarging Using Preset Ratios

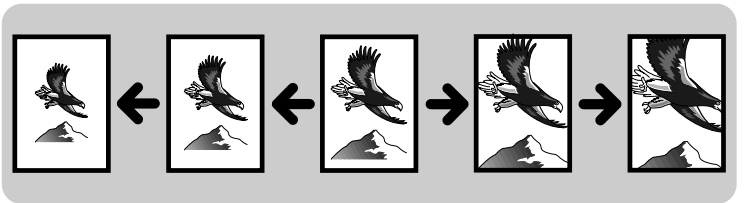
☛ See page 53.



Reducing And Enlarging In 1% Steps

☛ See page 54.

Using the [+] and [-] keys or Number keys

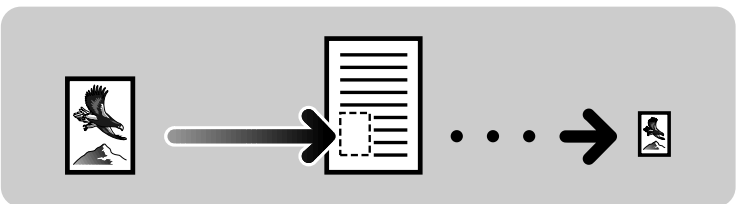


Stretching and squeezing the image

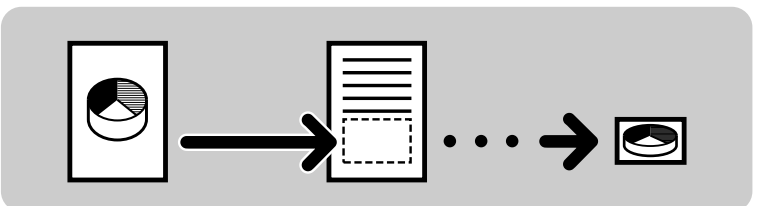
Fitting The Original To A Copy Of A Different Size

☛ See page 56.

Fitting the image in the copy area as it is



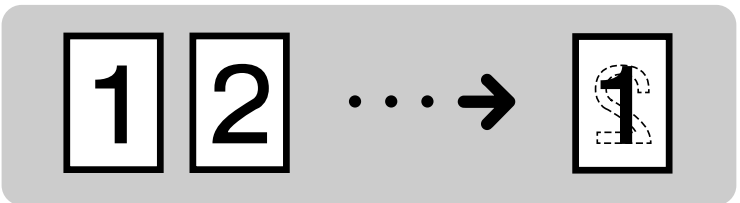
Stretching and squeezing the image into the copy area



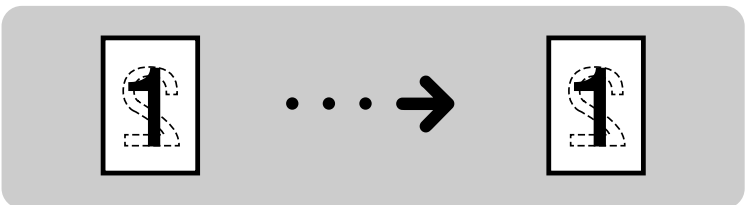
Making Two-sided Copies

☛ See page 58.

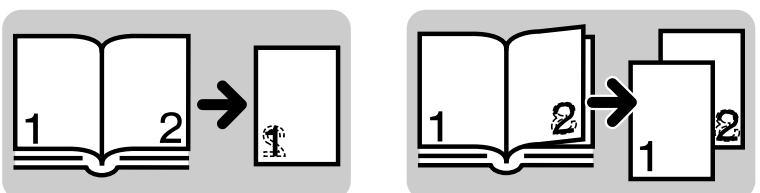
From one-sided originals



From two-sided originals

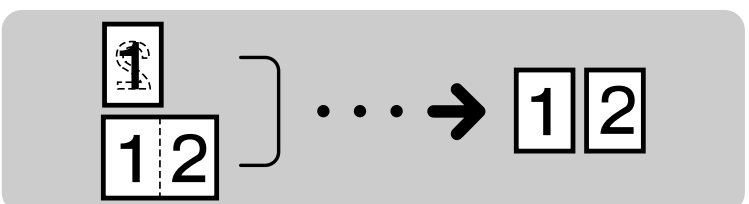


From book originals (Single) **(Multi)**



Making One-sided Copies

☛ See page 65.



Combining Originals Into One Copy

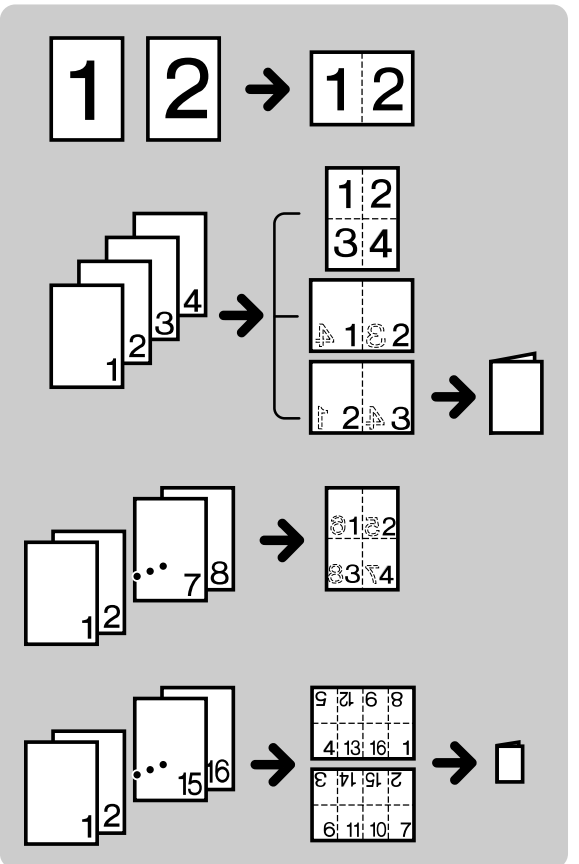
☛ See page 67.

From 2 one-sided originals

From 4 one-sided originals

From 8 one-sided originals

From 16 one-sided originals

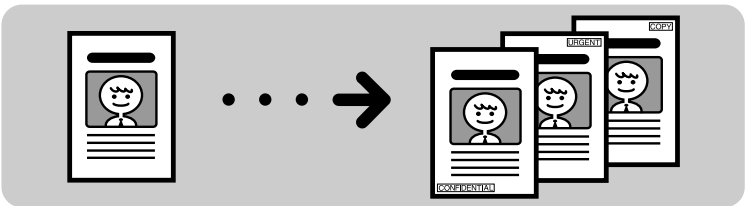


Printing Numbers On The Background Of Your Copies

☛ See page 71.

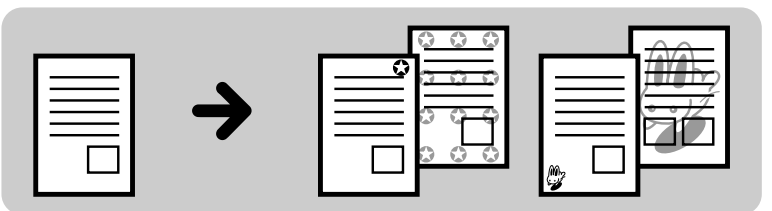
Printing Preset Messages On Your Copies

☛ See page 72



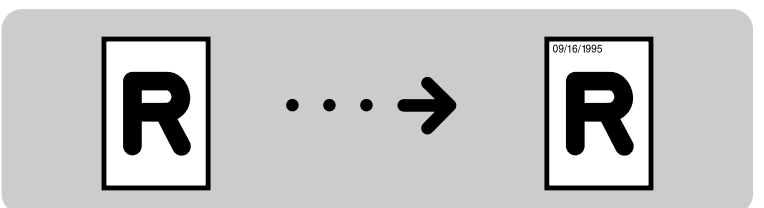
Printing Your Own Messages On Your Copies

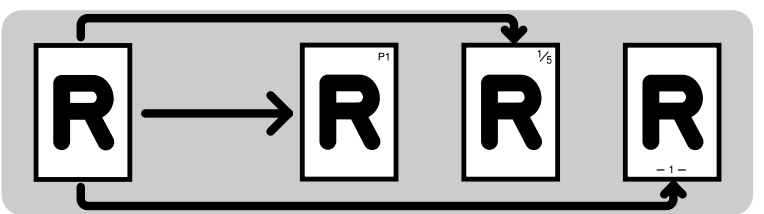
☛ See page 76.



Printing Dates And Page Numbers

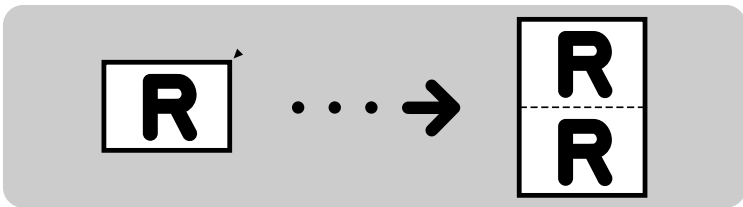
☛ See page 78.





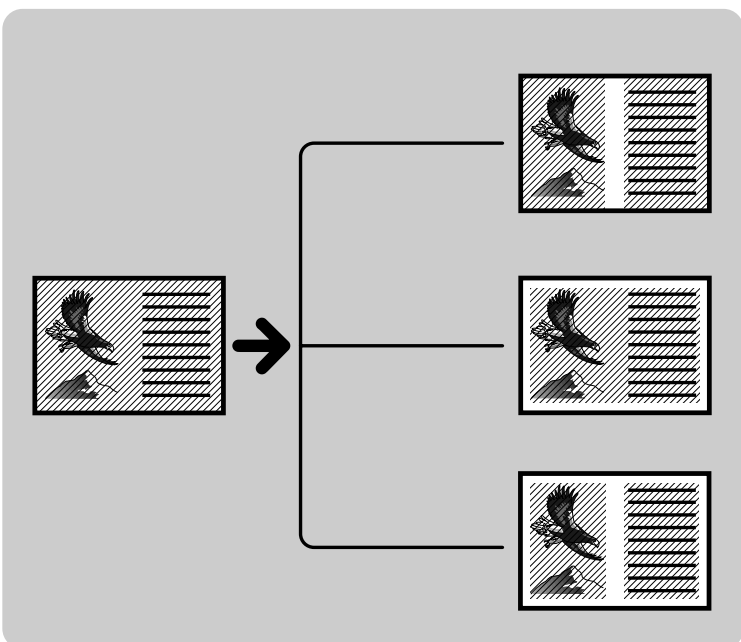
Copying The Image Twice On One Page

☛ See page 83.



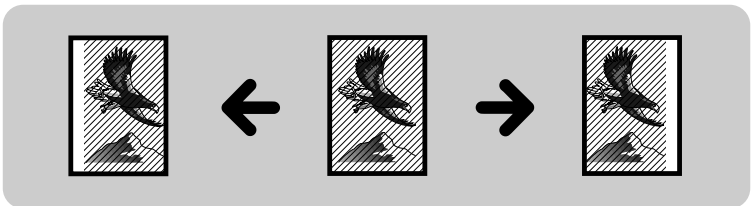
Erasing The Centre And The Border (Erase Centre/Border)

☛ See page 85.



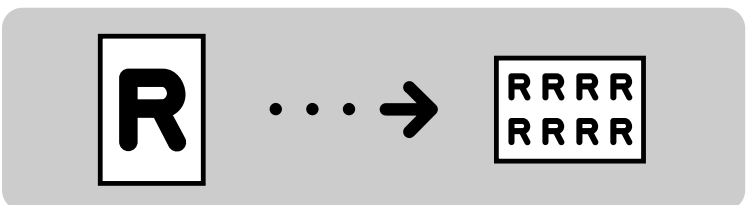
Adjusting The Margin

☛ See page 86.



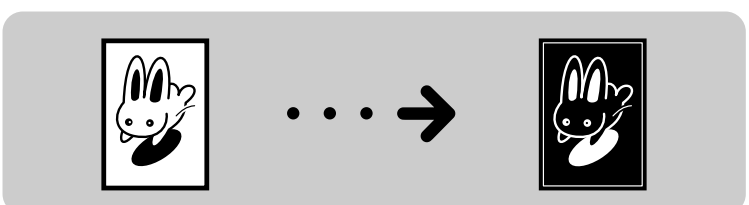
Repeating An Image Over The Entire Copy

☛ See page 88.



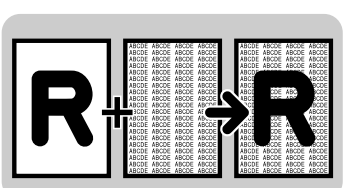
Reversing Black And White

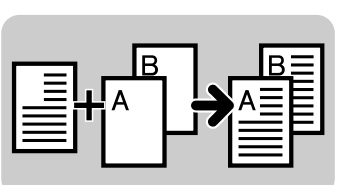
☛ See page 89.



Merging Images

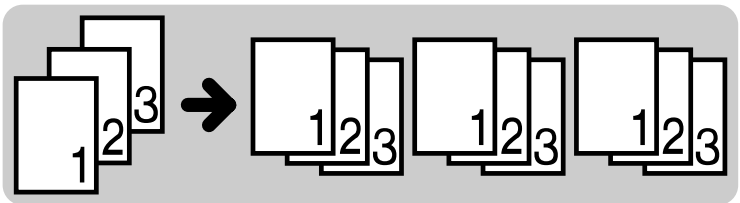
☛ See page 90.



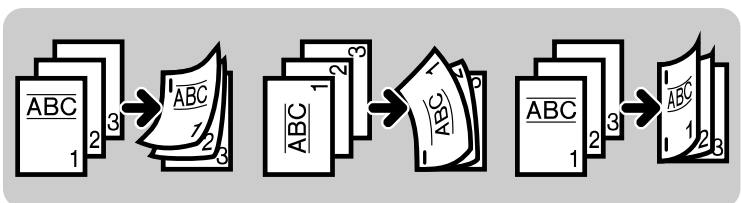


Optional Finishing

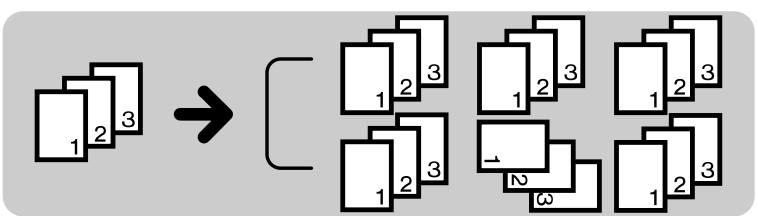
Sorting into sets with optional finisher (123, 123, 123) ☛ See page 93.



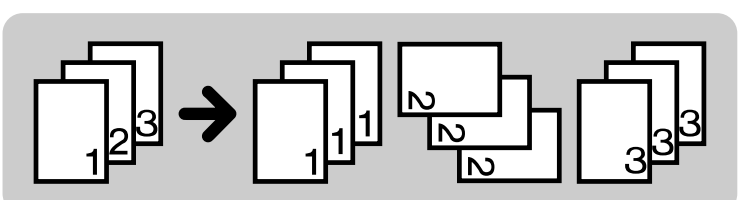
Stapling with optional finisher ☛ See page 96.



Sorting into sets with optional 3-bin sorter (123, 123, 123,)
☛ See page 101.



Stacking together all copies of a page with optional 3-bin sorter (111, 222, 333) ☛ See page 102.



BASICS

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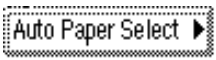
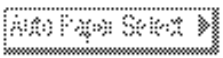
USING THE TOUCH PANEL DISPLAY

On the touch panel display, you can find keys, instructions and messages. By touching keys on the display, you can select or deselect functions and enter data for the selected modes. The display uses the following conventions:



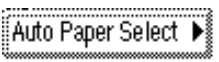
Keys that have the option of being selected.

Keys that have been selected.



Keys that have no option to select.

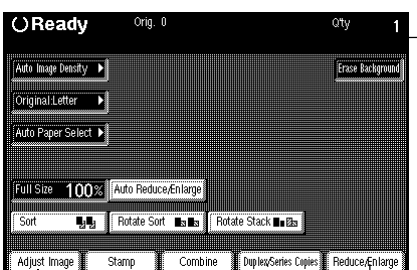
In this manual, we use the following convention:

Key on the display: 

In the manual : **[Auto Paper Select]** key

⚠*Caution: Do not press the touch panel display with any hard or sharp object (pen, pencil, etc.). Always use your fingers or something with a soft tip.*

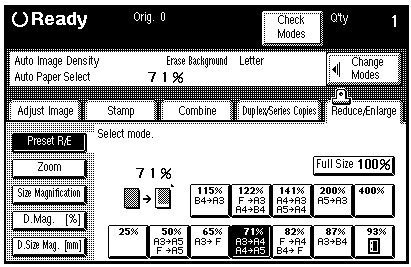
Initial display



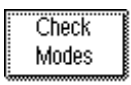
Messages and instructions appears here.

tag sheets

Display after selecting functions on the tag sheets

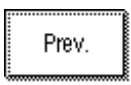


After selecting functions on tag sheets, the clip appears on the tag.



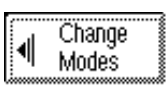
[Check Modes] key

When you have selected functions on tag sheets, this key appears on the upper right area on the touch panel display. Touch this key to see at a glance all the modes you selected.



[Prev.] key

This key appears in the upper right corner of the display when you touch the **[Check Modes]** key. Press to go back to the previous display.



[Change Modes] key

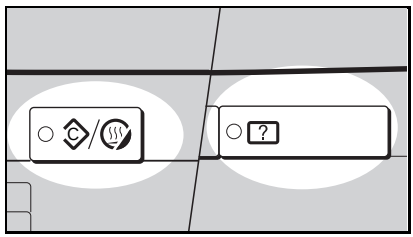
When you select functions on the tag sheets, this key appears on the display. Touch this key to change settings of the following modes:

image density, original type settings, copy paper size, Auto Reduce\Enlarge, and finishing

GETTING HELP ON THE DISPLAY

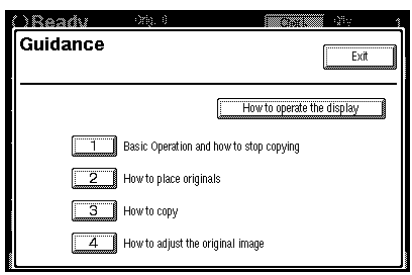
Press the **Guidance** key when you want to know detailed information about functions you use.

1 Press the **Clear Modes/Low Power Mode** key then the **Guidance** key.



2 Touch the key you want to know about on the touch panel display.

For example, if you want to know about "How to operate the display", touch the **[How to operate the display]** key.


Ready
Guidance
Exit
How to operate the display
1 Basic Operation and how to stop copying
2 How to place originals
3 How to copy
4 How to adjust the original image

- ❒ To go to the next page, touch the **[Next]** key. To return to the previous page, touch the **[Prev.]** key.
- ❒ To go back to the display shown after pressing the **Guidance** key, touch the **[Menu]** key.
- ❒ To exit from the guidance display, touch the **[Exit]** key.

RECOMMENDED & NON-RECOMMENDED ORIGINALS

Recommended Originals

❒ Regarding originals that the optional document feeder can handle, ☛ see "DOCUMENT FEEDER (OPTION)" in the "General Reference".

Non-recommended Originals For The Optional Document Feeder

⚠*CAUTION:* *The following types of originals are not recommended for use with the document feeder. Place them directly on the exposure glass.*

❒ Originals thicker than 128 g/m^2, 34 lb

❒ Originals thicker than 105 g/m^2, 28 lb when using two-sided originals

❒ Originals thinner than 40 g/m^2, 11 lb. But for originals between 40 and 52 g/m^2 (11 and 14 lb), the document feeder must be set to Thin Paper mode. ☛ See "USER TOOLS (ADF: Thin Paper Mode)" in the "General Reference".

❒ Originals larger than A3, 11" x 17"

❒ Originals smaller than A5, 5 1/2" x 8 1/2"

❒ Paper with any king of coating (such as carbon) on the back

❒ Folded, curled, creased, or damaged originals

❒ Mailing labels, or perforated originals

❒ OHP transparencies

❒ Translucent paper

❒ Pasted originals

❒ Damp originals

❒ Sticky originals

❒ Wavy originals

❒ Originals that are not made from paper

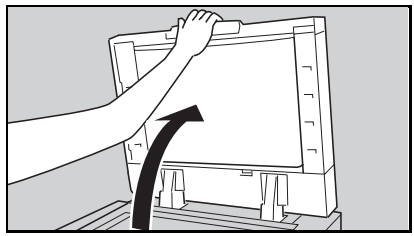
❒ Originals written in pencil on both sides, or two-sided carbon originals

❒ Thermal fax paper, CRO (camera ready original) or aluminum foil

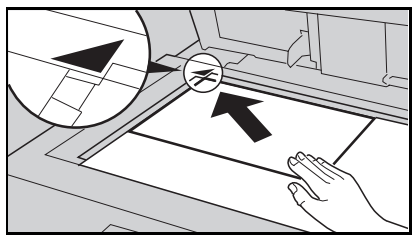
❒ Originals with globs of ink from a ball-point pen

SETTING ORIGINALS ON THE EXPOSURE GLASS

1. Lift the optional platen cover or the optional document feeder.



2. Set the original *face down* on the exposure glass. The original should be aligned to the rear left corner.



3. Lower the optional platen cover or the optional document feeder.

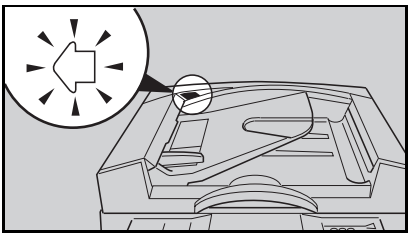
SETTING A STACK OF ORIGINALS IN THE OPTIONAL DOCUMENT FEEDER (ADF)

You can insert a stack of originals (one-sided or two-sided) of the same size into the document feeder. These originals are individually fed onto and removed from the exposure glass.

- ❒ If you want to set originals of different sizes at the same time, use the user tools. ☞ See page 127.

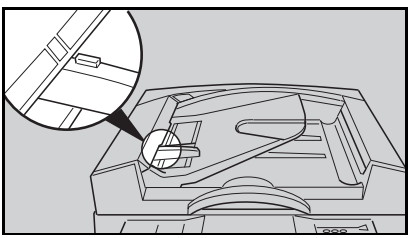
1. Correct any curl, fold, or crease in the originals before setting.

2 Confirm that the **Insert Original** indicator is lit before setting the originals.



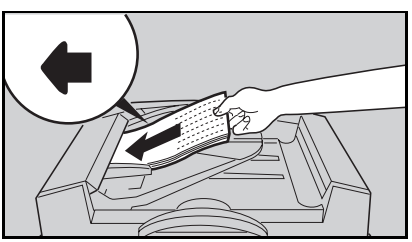
3 Confirm that no previous originals remain on the exposure glass.

4 Adjust the guide to the original size.

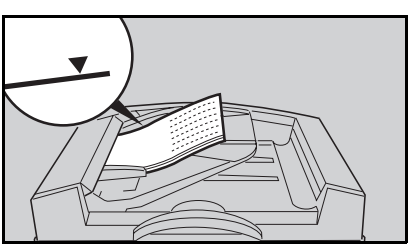


5 Set the originals *face up* into the document feeder until the **Insert Original** indicator goes off.

- ❒ The last page should be on the bottom.
- ❒ The guide must touch the front side of the originals.



- ❒ Do not stack originals above the limit mark.



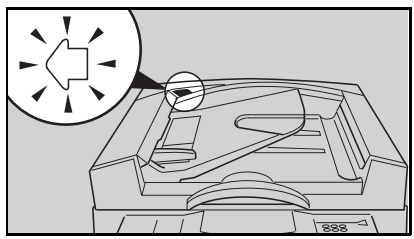
SETTING ONE ORIGINAL AT A TIME IN THE OPTIONAL DOCUMENT FEEDER (SADF)

You can insert one original at a time into the document feeder. The original is automatically fed onto and removed from the exposure glass.

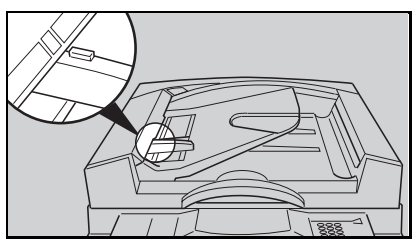
1 Correct any curl, fold, or crease in the originals before setting.

2 Confirm that the **Insert Original** indicator is lit before setting the originals.

3 Confirm that no previous originals remain on the exposure glass.

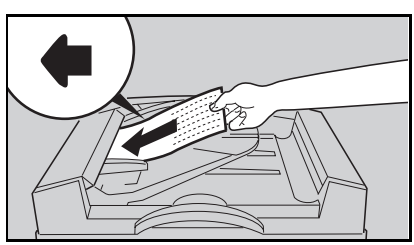


4 Adjust the guide to the original size.



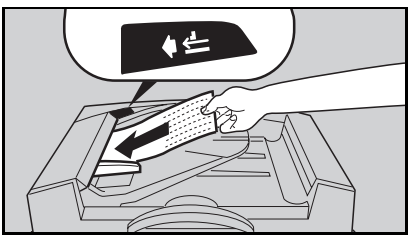
5 Set the original *face up* into the document feeder until the **Insert Original** indicator goes off.

- ❒ If you are copying a stack of originals one sheet at a time and you want to keep them in order, start with the last page of the originals.
- ❒ The original guide must touch the front side of the original.



6 Press the **Start** key.

7 While the **Auto Feed** indicator is lit after an original is fed, set the next original. The original is automatically fed and copied.



❒ If you have set more than two originals, the **Auto Feed** indicator is not lit after the last original is fed. In this case, press the **Start** key again after setting an original.

COPYING

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COMBINATION CHART 103

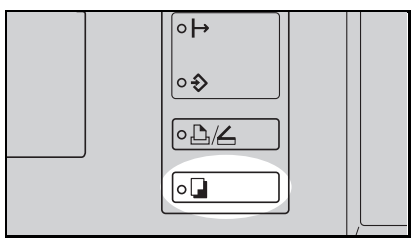
BASIC OPERATIONS

Entering The Copy Mode

If your machine is set to Share or Printer Priority mode, the Copy mode is default after turning on the main switch. If there are no current print or scan jobs, the Copy screen is shown and you can use all copying functions. It is not necessary for you to operate the machine to enter the Copy mode. If your machine is in the Printer or Scanner mode, do the following procedure to enter the Copy mode.

❒ If your machine is set to Printer Only or Scanner Only mode, you cannot use the copying functions. Regarding detailed information, ☛ see "SWITCHING BETWEEN THE PRINTER, COPIER AND SCANNER FUNCTIONS" of the "General Reference."

1 Press the **Copy** key to enter the Copy mode.



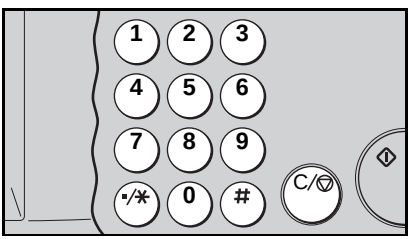
One-to-one Copying (Full Size Copying)

You can make copies that are the same size as your originals.

1 Set your original on the exposure glass or in the optional document feeder. ☛ See pages 28 ~ 31.

2 Enter the number of copies required using the **Number** keys.

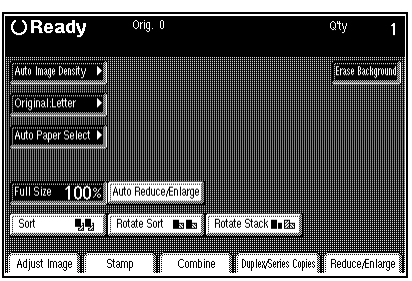
❒ To change the number entered, press the **Clear/Stop** key, then enter the new number.



3 Confirm that the **[Auto Paper Select]** key is dark. If not, touch the **[Auto Paper Select]** key, or select the proper paper size using keys on the display.

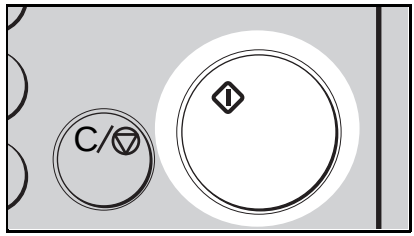
❒ Regarding Auto Paper Select, ☛ see page 38.

❒ Regarding selecting paper size, ☛ see page 37.



4 Make sure that the **[Full Size]** key is dark. If not, touch it.

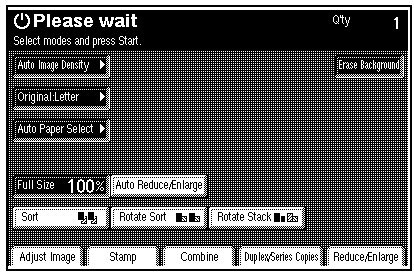
5 Press the **Start** key.



- To stop the copier during the multi-copy run, press the **Clear/Stop** key.
- Press the **Start** key to resume copying, or press the **Clear/Stop** key to clear the entered copy number.

Entering Copy Job Settings During The Warm-up Period (Auto Start)

During the warm-up period (within 140 seconds), the display is as shown. If you enter your copy job settings and press the **Start** key during the warm up period, the copier will start copying automatically when the copier reaches the ready condition.

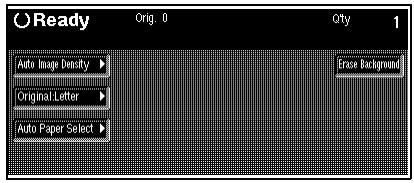


- To cancel Auto Start, press the **Clear/Stop** key.

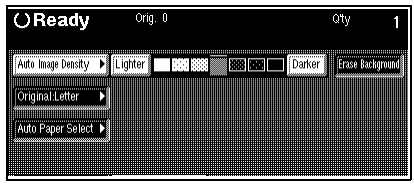
Adjusting Copy Image Density

Auto and manual image density

If the **[Auto Image Density]** key is dark, Auto Image Density is selected. If not, touch the **[Auto Image Density]** key.



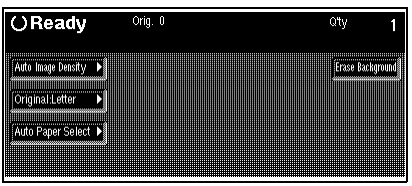
If the **[Auto Image Density]** key is light, Manual Image Density mode is selected. To get a darker image, touch the **[Darker]** key. To get a lighter image, touch the **[Lighter]** key.



Erasing Background (Erase Background)

Use this mode to mask out a dirty background (e.g. with a newspaper) and get clear copies.

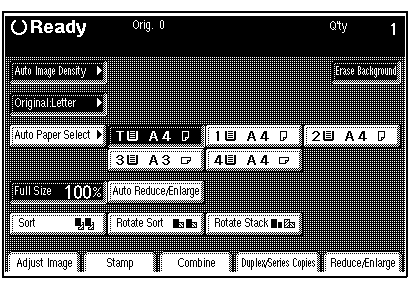
Confirm that the **[Erase Background]** key is dark. If not, touch it.



Selecting The Copy Paper Size (Manual Paper Select)

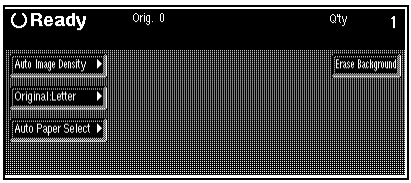
You can select the desired copy paper size manually by touching one of the tray keys in the display.

- ❒ Regarding setting copy paper in the bypass tray, ☛ see page 48.
- ❒ The keys that have an * (asterisk) cannot be used for Auto Paper Select.



Having The Copier Choose The Paper Size(Auto Paper Select)

The copier selects a suitable size of copy paper based on the original size and the reproduction ratio. Make sure that the **[Auto Paper Select]** key is dark. If not, touch the **[Auto Paper Select]** key.



- If you use translucent or transparent originals or originals with tags, the original size might not be detected correctly.
- When placing the original on the exposure glass directly, make sure that the optional platen cover or optional document feeder is lowered before pressing the **Start** key. Otherwise, the original size might not be detected correctly.
- When the original is set at a different direction from the copy paper in the paper tray and the required paper size is A4, 8 1/2" x 11" or smaller, the copier automatically rotates the original image by 90º to match the copy paper direction and make copies.
- The tray keys that have an * (asterisk) cannot be used for the Auto Paper Select.
- Regarding the combination of the Auto Paper Select and Stapling, ☛ see page 97.
- Regarding functions that cannot be used together with this function, ☛ see page 103.

❒ When you use Auto Paper Select, refer to the following table for possible copy paper sizes

Metric version

Original	Possible selected paper sizes for copy
A or B type*	A or B type*
8" x 13"	8" x 13"***, A or B type*
8 1/4" x 13"	8 1/4" x 13"***, A or B type*
8 1/2" x 13"	8 1/2" x 13"***, A or B type*
LT type**, 8" x 10"	LT type**, 8"x 10", A or B type*

* :A type (A3, A4, A5), B type (B4, B5, B6)

** :LT type: 11" x 17", 8 1/2" x 11"

*** :F/F4 size selected by user tools. ☛ See "USER TOOLS" in the"General Reference".

Inch version

Original	Possible selected paper sizes for copy
LT type	LT type
A4	A4, LT type
8" x 13"	8" x 13"**, LT type
8 1/4" x 13"	8 1/4" x 13"**, LT type
8 1/2" x 13"	8 1/2" x 13"**, LT type
11" x 15", 10" x 14", 8" x 10"	11" x 15", 10" x 14", 8" x 10", LT type

* :LT type: 11" x 17", 8 1/2" x 14", 8 1/2" x 11", 5 1/2" x 8 1/2"

** :F/F4 size selected by user tools. ☛ See "USER TOOLS" in the "General Reference".

Having The Copier Choose The Reproduction Ratios (Auto Reduce/Enlarge)

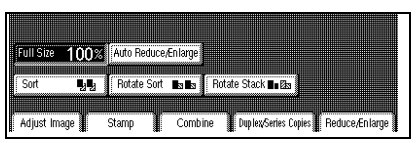
The copier can choose an appropriate reproduction ratio based on the paper and original sizes you select.

- If you use translucent or transparent originals or originals with tags, the original size might not be detected correctly.
- When placing the original on the exposure glass directly, make sure that the optional platen cover or optional document feeder is lowered before pressing the **Start** key. Otherwise, the original size might not be detected correctly.
- When the original is set at the different direction from the selected copy paper, the copier *cannot* rotate the image by 90º. Make sure to set the original in the same direction as the copy paper.
- Regarding functions that cannot be used together with this function, ☛ see page 103.

Example:

Metric version:	Original: A3 ◪,	Copy paper: A4 ◪
Inch version:	Original: 11" x 17" ◪,	Copy paper: 8 1/2" x 11" ◪

1 Touch the **[Auto/Reduce Enlarge]** key.

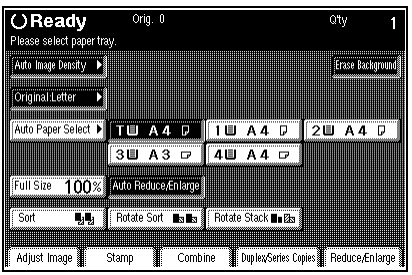


2 Set your original on the exposure glass or in the optional document feeder. ☛ See pages 28 ~ 31.

3 Select the copy size you require:

Metric version:
Touch the **[A4 ▱]** paper tray key.

Inch version:
Touch the **[8 1/2" x 11" ▱]** paper tray key.



4 Press the **Start** key. The original image is reduced to fit the selected copy paper.

Selecting Original Type Setting (Letter, Letter/Photo, Photo, Generation Copy)

There are four types of original type setting. Select the appropriate original type to match the kind of originals you are copying from.

❒ Letter mode is the default. You can change this setting using the user tools.
☛ See page 117.

Letter

Select Letter mode when your originals contain only letters (no picture).

Letter/Photo

Select Letter/Photo when your originals contain photographs or pictures with letters.

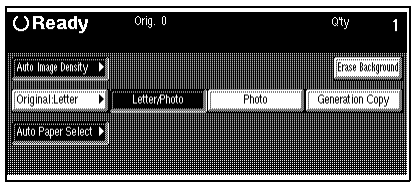
Photo

Delicate tones of photographs and pictures can be reproduced with this mode.

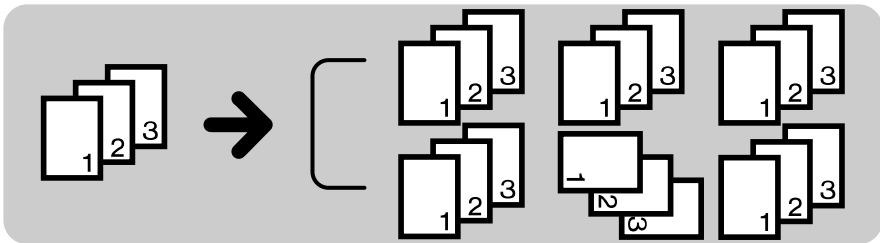
Generation copy

If your originals are copies, so called generation copies, the copy image can be reproduced sharply and clearly.

1 Letter mode is selected by default. Select the desired setting by touching one of four keys.



Sorting Into Sets (123,123,123) (Sort, Rotate Sort)



The copier puts images of more than two originals into memory and copies are collated into sets. In Sort mode, every copy set is delivered on the copy tray. In Rotate Sort mode, every other copy set is rotated by 90° and delivered to the copy tray, so that each set can be easily separated.

Notes for above modes

- ❒ You can make up to 999 copy sets at a time. However, when the number of copies exceeds the capacity of the copy tray, remove copies from the copy tray. Regarding the capacity of the copy tray, ☛ see page 130.
- ❒ After starting copying, the only setting you may change is image density, The change will apply from the next copy. ☛ See page 36.
- ❒ The maximum number of pages that can be stored is as follows:
  A4, 8 1/2" x 11": Approximately 100 pages (images)
- ❒ You can change the settings of these modes with the user tools. ☛ See page 127.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

Notes for Rotate Sort mode

- ❒ Paper sizes that can be used in Rotate Sort mode are as follows:
  A4, B5, 8 1/2" x 11"
- ❒ Two paper trays that are identical in size and different in direction are required. You can change this setting using the user tools. ☛ See page 127.
- ❒ This mode does not support different size originals.

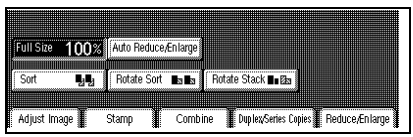
Notes for Sort mode

❒ When you make two-sided copies in Sort mode, the maximum number of copies stacked in the unit for two-sided copies (duplex unit) is as follows:

A3, 11" x 17": 30 sheets
Other sizes: 50 sheets

❒ Different size originals can be used only when you make one-sided copies from one-sided originals.

1 Touch the **[Sort]**, or **[Rotate Sort]** key.



2 Enter the number of copy sets with the **Number** keys.

3 When setting one original at a time

❶ Set an original on the exposure glass or in the optional document feeder (☞ see page 28 or 30). Then press the **Start** key. The copier starts memorizing the original image.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green, or the **Auto Feed** indicator on the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❒ Set the original in the same direction as step ❶.

❒ When the memory reaches 0%, the copier stops memorizing. Press the **Start** key to finish copy jobs which are already into memory. After that, follow the instructions on the display.

❸ Repeat step ❷ until all originals are scanned.

❹ After all originals are put into memory, press the **Enter** key.

❒ If you are making one-sided copies, the first set of copies will have completed.

❺ Press the **Start** key.

3 When setting a stack of originals in the document feeder

❶ Set a stack of the originals in the document feeder (☛ see page 28), then press the **Start** key.

❒ The last page should be on the bottom.

❒ When memory runs out during copying, the machine can be programmed to behave in two ways with the user tools.

- ♦ Memory Full Auto Scan Restart = **[Yes]**
  → After all images in memory are copied, the machine will re-start scanning automatically.
  You should re-order your copies after all copy jobs are finished.

- ♦ Memory Full Auto Scan Restart = **[No]**
  → The machine will wait for you to press the **Start** key. At this point you should remove your copies from the copy tray. Press the **Start** key and then follow the instructions on the display to continue copying.

If you want to change the setting with the user tools, ☛ see page 127.

❒ If you make one-sided copies, the first set of copies has been completed when all original images are stored in the memory.

Stopping storing images and deleting stored images during copying

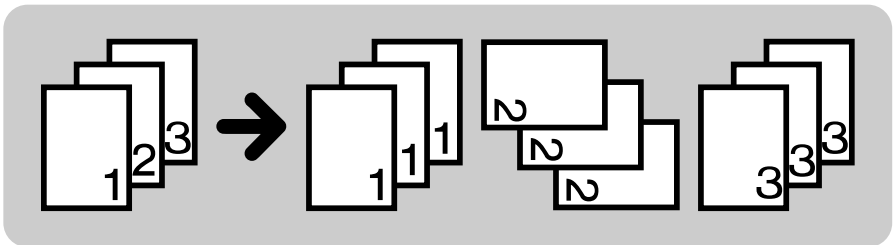
1 Press the **Clear/Stop** key.

❒ The copying run of the 1st set and scanning will stop.

2 Press the **Clear/Stop** key again. If you want to delete stored images, touch the **[Yes]** key following the instructions on the display.

❒ You cannot delete the stored images by press the **Clear/Stop** key, if copies have been stacked in the unit for two-sided copies (duplex unit) when making two-sided copies. In this case, after the step **1**, press the **Clear Modes/Low Power Mode** key. So that, all settings and stored images will be cleared. Then remove copies in the duplex unit by opening the front cover. For position of the duplex unit, ☛ see page 4.

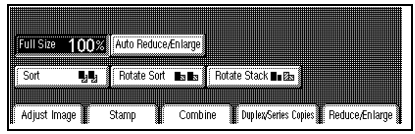
Stacking Together All Copies Of A Page (111,222,333) (Rotate Stack)



Each original is copied together. Every other copies is delivered to the copy tray, turned 90º.

- ❒ You can make up to 999 copy sets at a time. However, when the number of copies exceeds the capacity of the copy tray, remove copies from the copy tray. Regarding the capacity of the copy tray, ☛ see page 130.
- ❒ These modes do not support different size originals.
- ❒ After starting copying, the only setting you may change is image density, The change will apply from the next copy. ☛ See page 36.
- ❒ Two paper trays that are identical in size and different in direction are required. You can change this setting with the user tools. ☛ See page 127.
- ❒ The paper sizes that can be used in the Rotate Stack mode is as follows:
  A4, B5, 8 1/2" x 11"
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

1 Touch the **[Rotate Stack]** key.



2 Enter the number of copies with the **Number** keys.

3 When setting one original at a time

❶ Set an original on the exposure glass or in the optional document feeder (☛ see page 28 or 30). Then press the **Start** key.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green or the **Auto Feed** indicator on the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❒ Set the original in the same direction as step ❶.

❸ Repeat step ❷ until your copying is finished.

3 When setting a stack of originals in the document feeder

❶ Set a stack of the originals in the document feeder (☛ see page 28), then press the **Start** key.

❒ Last page should be on the bottom.

Copying From The Bypass Tray

Use the bypass tray to copy onto OHP transparencies, adhesive labels, translucent paper, post cards, and copy paper that cannot be set in the paper tray.

- ❒ Approximately 40 sheets of copy paper (64 g/m2, 17 lb) can be inserted at a time.
- ❒ Before making copies onto OHP transparencies, adhesive labels, translucent paper, and post cards, read the notes for them. ☛ See"USE AND STORAGE OF SUPPLIES" in the "General Reference".
- ❒ When you make copies using the bypass tray, it is recommended to set paper in the bypass tray lengthwise (▭).
- ❒ When using the bypass tray, the large capacity tray cannot be used.
- ❒ The following sizes can be used as standard size copy paper. If you use other paper sizes, you should input vertical and horizontal dimensions.

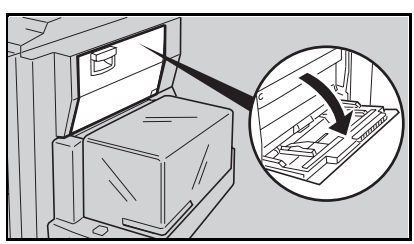
Metric version	Inch version
A3 ▭, B4 ▭, A4 ▯ ▭, B5 ▯ ▭, A5 ▯ ▭, B6 ▯ ▭, A6 ▯ ▭, 11" x 17" ▭	11" x 17" ▭, 8 1/2" x 14" ▭, 8 1/2" x 11" ▯ ▭, 5 1/2" x 8 1/2" ▯ ▭, 8" x 13" ▭,

- ❒ Regarding the functions that cannot be used together with this function, ☛ see page 103.
- ❒ If your machine is equipped with the optional 3-bin sorter, 5 1/2" x 8 1/2" ▯ cannot be used.

1 Set your original on the exposure glass or in the optional document feeder. ☛ See pages 28 ~ 31.

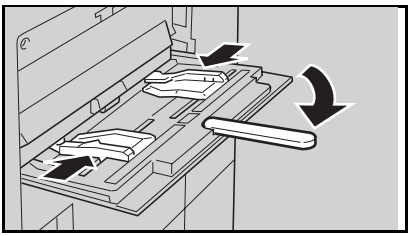
2 Open the bypass tray. The **[Bypass Tray]** key appears on the display.

- ❒ If the **[Bypass Tray]** key is not dark, touch it.



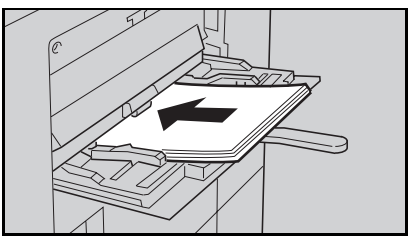
3 When copying onto standard size copy paper

❶ Slide the paper guides to the paper width and, if necessary, swing out the extender to support large size copy paper.



❷ Insert the copy paper into the bypass tray until the beeper sounds.

❒ The beeper can be canceled with the user tools. ☛ See "USER TOOLS" in the "General Reference".



❸ Press the **Start** key.

3 When copying onto non-standard size paper

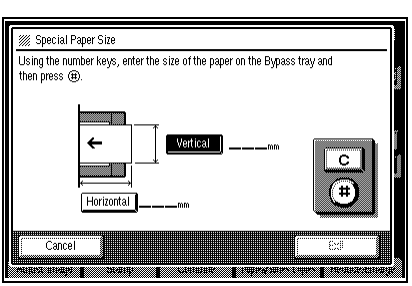
Acceptable non-standard paper sizes:

Metric version:
- Vertical: 100 ~ 297 mm (in 1 mm steps)
- Horizontal: 148 ~ 432 mm (in 1 mm steps)

Inch version:
- Vertical: 4.0" ~ 11.7" (in 0.1" steps)
- Horizontal: 6.0" ~ 17.0" (in 0.1" steps)

❶ Press the **Enter** key.

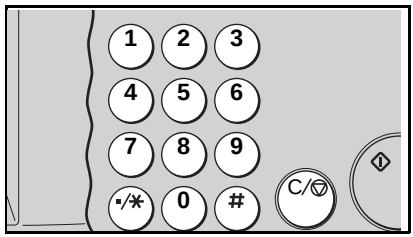
❷ The display changes as shown.



❸ Enter the vertical size of the paper using the **Number** keys.

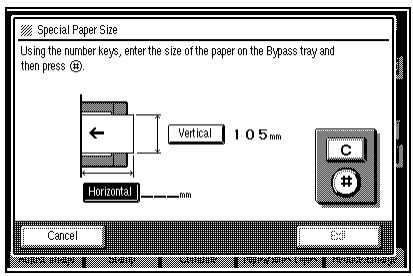
❒ To change the number entered, touch the **[C]** key or press the **Clear/Stop** key.

❹ Touch the **[#]** key in the display or press the **Enter** key.



❺ Enter the horizontal size of the paper using the **Number** keys. Then, touch the **[#]** key in the display or press the **Enter** key.

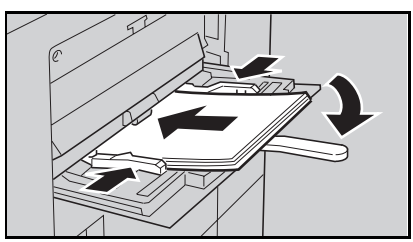
❻ Touch the **[Exit]** key to close this menu.



❼ The **[Bypass Tray]** key changes to **[Special Paper Size]** key.

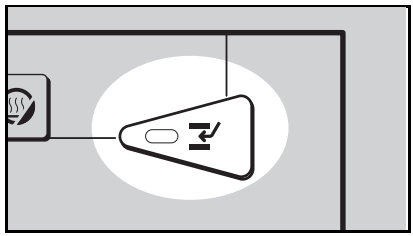
❽ Adjust the guides to copy paper size and insert the copy paper until the beeper sounds.

❒ The beeper can be canceled with user tools. ☛ See "USER TOOLS" in the "General Reference".



❾ Press the **Start** key.

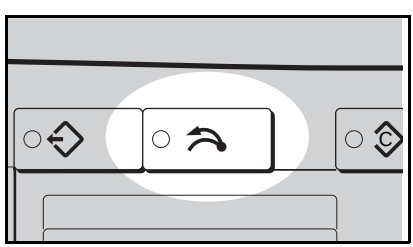
Temporarily Stopping One Job To Copy Something Else (Interrupt)



You can make urgently needed copies during a multicopy run by pressing the **Interrupt** key. The interrupted copy job settings are stored in the machine's memory. After interrupt copying is completed, press this key again to recall the previous copy job settings.

- In Interrupt mode, is displayed on the display.
- If you use this function with the optional document feeder, you might have to reset originals not to be copied after interrupt copying is finished. Follow the instructions on the display.
- If the optional 3-bin sorter is equipped with your machine, copies will be delivered to 3rd bin.
- Regarding the functions that cannot be used together with this function, see page 103.

Recalling Job Settings (Job Recall)



The previous copy job settings before auto reset or Low Power mode can be recalled by pressing the **Job Recall** key. When the previous copy job setting is saved, the **Job Recall** indicator is lit.

Storing Your Copy Setting In Memory (Program)

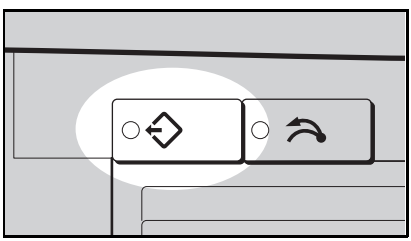
Your ten frequent copying jobs can be stored in the machine's memory.

❒ The stored program cannot be deleted. If you want to change the stored program, overwrite the stored program.

Storing your settings

1. Set the copy settings you want to put into memory.

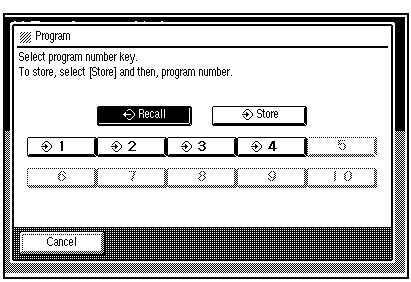
2. Press the **Program** key.



❒ If you want to cancel storing, touch the **[Cancel]** key.

3. Touch the **[Store]** key.

4. Touch one of the **[1]** ~ **[10]** keys that you want to store your settings in.



❒ A key with ◈ has already settings in it. If you want to overwrite settings, touch the key with ◈ and follow the instructions on the display.

Recalling a program

1. Press the **Program** key.

2. Make sure that the **[Recall]** key is dark. If not, touch it.

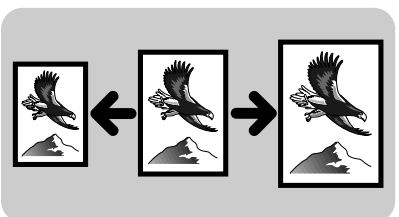
3. Touch one of the **[1]** ~ **[10]** keys that has ◈ on it.

REDUCING AND ENLARGING (Reduce/Enlarge)

❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

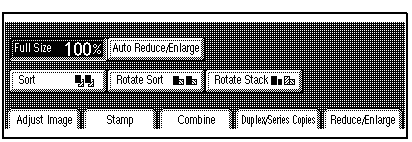
Reducing And Enlarging Using Preset Ratios (Preset R/E)

You can select one of 12 preset ratios (5 enlargement ratios, 7 reduction ratios).



❒ You can add 2 fixed preset ratios using the user tools. ☛ See page 118.

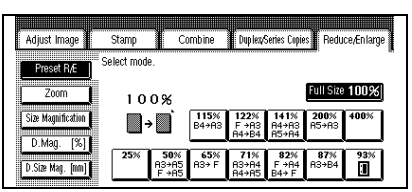
1 Touch the **[Reduce/Enlarge]** key.



2 Confirm that the **[Preset R/E]** key is dark. If not, touch the **[Preset R/E]** key.

3 Touch the desired reproduction ratio.

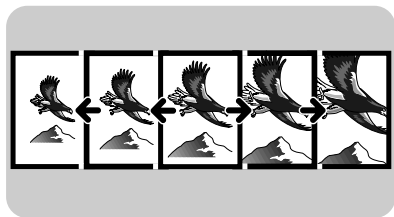
❒ Refer to the copy and paper sizes on keys to select the appropriate ratio to match your originals and copy paper.



Reducing And Enlarging In 1% Steps

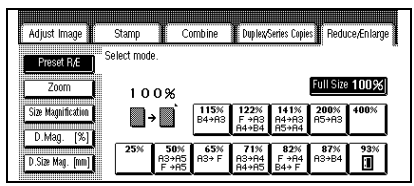
Using the (+) and (-) keys or Number keys (Zoom)

The reproduction ratio can be changed from 25% to 400% in 1% steps. There are two ways to change ratios.



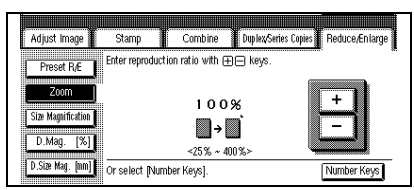
1 Touch the **[Reduce/Enlarge]** key.

2 Touch the **[Zoom]** key.



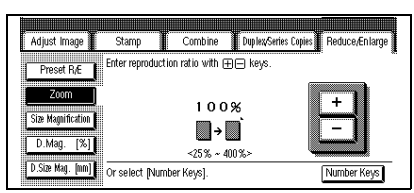
3 When using the (+) and (-) keys

❶ Enter the desired reproduction ratios touching the **[+]** and **[-]** keys on the display.



3 When using number keys

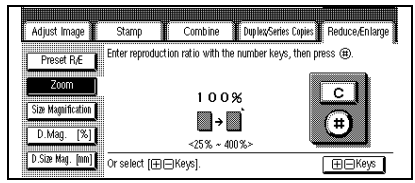
❶ Touch the **[Number Keys]** key.



❷ Enter the desired ratio using the **Number** keys.

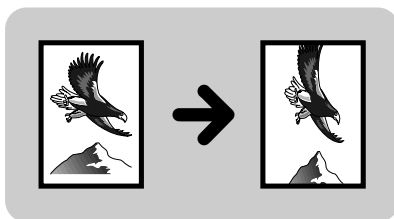
❒ To change the number entered, touch the **[C]** key or press the **Clear/Stop** key, then enter the new number.

❸ Touch **[#]** key on the display or press the **Enter** key.



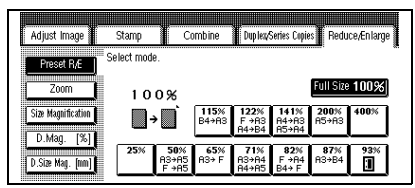
Stretching and squeezing the image (Directional Magnification)

Copies can be reduced or enlarged at different reproduction ratios horizontally and vertically. There are two ways to change ratios.



1 Touch the **[Reduce/Enlarge]** key.

2 Touch the **[D. Mag. (%)]** key.



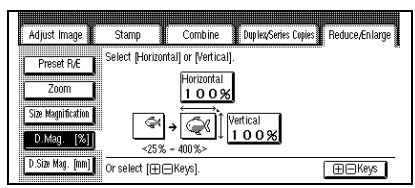
3 When using number keys

❶ Touch the **[Horizontal]** or **[Vertical]** key that you want to change the ratio.

❷ Enter the desired ratio using the **Number** keys.

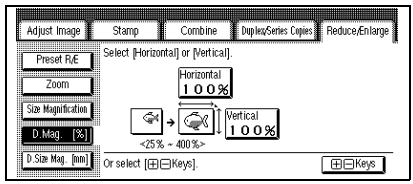
❒ To change the entered ratios, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new ratios.

❸ Touch the **[#]** key or press the **Enter** key.

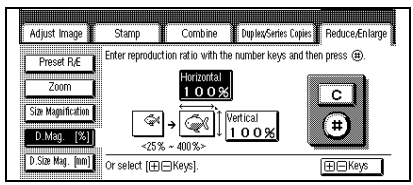


3 When using (+) and (-) keys

❶ Touch the **[+- Keys]** key.



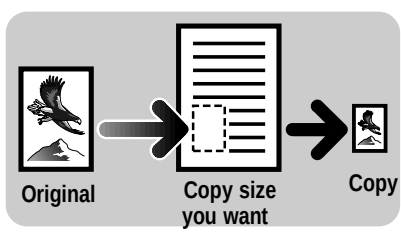
❷ Touch the **[Horizontal]** or **[Vertical]** key that you want to change the ratio. Select the desired ratios using **[+]** and **[-]** keys.



Fitting The Original To A Copy Of A Different Size

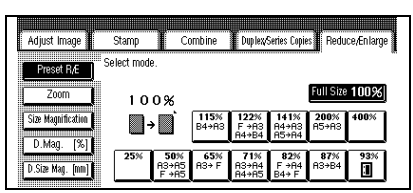
Fitting the image in the copy area as it is (Size Magnification)

The suitable reproduction ratio will be automatically selected when you enter the lengths of the original and copy image you want.



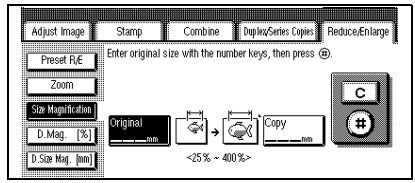
1 Touch the **[Reduce/Enlarge]** key.

2 Touch the **[Size Magnification]** key.



3 Enter the original size with the **Number** keys.

❒ To change the entered size, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new size.

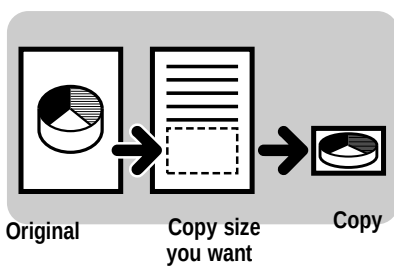


4 Touch the **[#]** key or press the **Enter** key.

5 Enter the copy size by the **Number** keys. Touch the **[#]** key or press the **Enter** key.

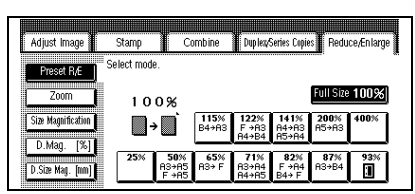
Stretching and squeezing the image into the copy area (Directional Size Magnification)

Copies can be reduced or enlarged to match independent horizontal and vertical size settings.



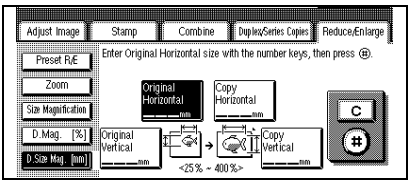
1 Touch the **[Reduce/Enlarge]** key.

2 Touch the **[D. Size Mag. (mm)]** key.



3 Enter the original horizontal size by the **Number** keys.

- To change the entered size, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new size.



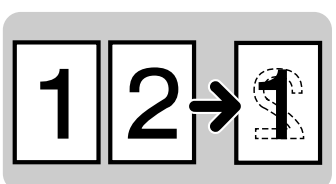
4 Touch the **[#]** key or press the **Enter** key.

5 Repeat steps 3 and 4 to enter the other sizes, following the display instructions.

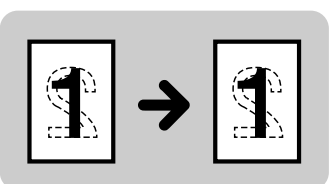
WORKING WITH BOTH SIDES OF ORIGINALS AND COPIES (Duplex/Series Copies)

Making Two-sided Copies (Duplex)

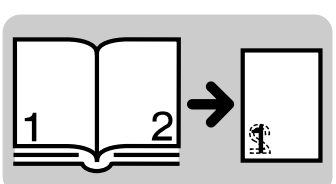
From one-sided originals (1 Sided → 2 Sided)



From two-sided originals (2 Sided → 2 Sided)

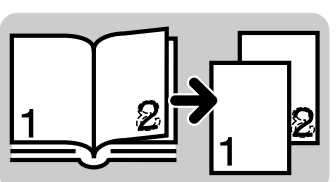


From book originals (Single)



This mode makes two-sided copies from two facing pages of a bound (book) original.

From book originals (Multi)



This mode makes the copies face each other exactly as the bound (book) originals do.

- When you make two-sided copies from one-sided originals, a right margin of 5 mm (0.2") is automatically set on the back side. You can change this setting with the user tools. ☛ See pages 118 and 119.
- You can change a setting of this mode with the user tools. ☛ See page 126.
- Single and Multi modes do not support different size originals.
- Regarding functions that cannot be used together with this function, ☛ see page 103.
- The following paper limitations apply:

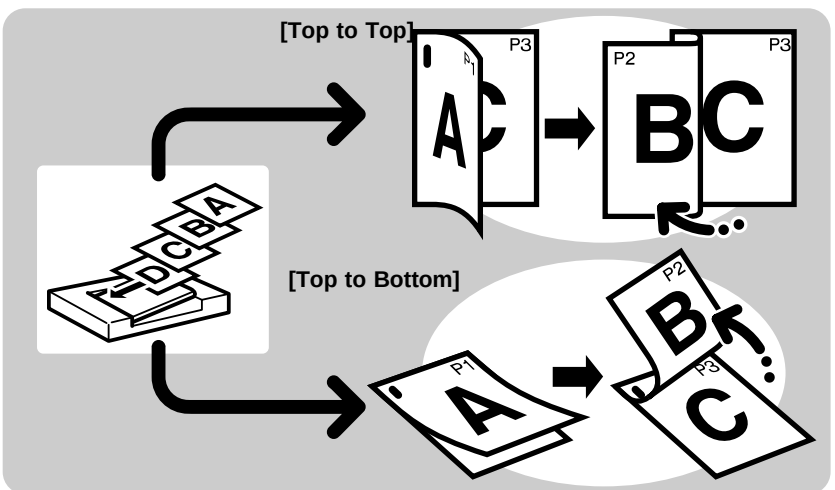
Metric version:	Maximum size:	A3 ▭
	Minimum size:	A5 ▯
	Weight:	64 ~ 105 g/m^2
Inch version:	Maximum size:	11" x 17" ▭
	Minimum size:	5 1/2" x 8 1/2" ▯
	Weight:	17 ~ 24 lb

- Maximum number of copies (not in Sort, Rotate Sort, or Staple mode):

Metric version:	50 sheets
	30 sheets (A3, 81 ~ 105 g/m^2)
Inch version:	50 sheets
	30 sheets (11" x 17", 22 ~ 24 lb)

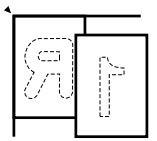
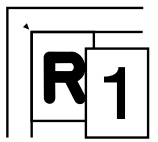
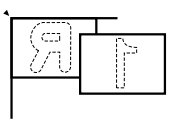
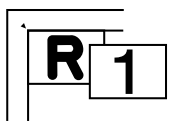
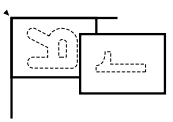
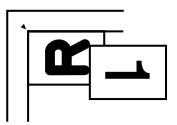
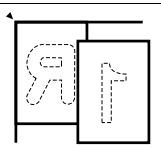
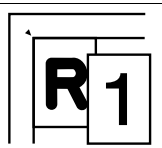
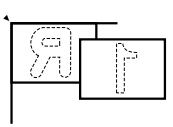
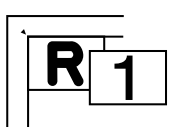
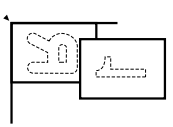
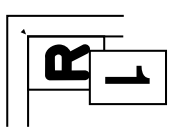
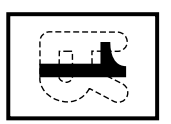
❒ If you select Stapling (**[Top]**) and Page Numbering (**[P1, P2...]** or **[1/5, 2/5...]**) together when making two-sided copies, it is recommended to set Duplex and Page Numbering modes as described below to avoid page numbers and staple position overlap on the reverse side of copies.

1. At first, set the Duplex mode as you want.
2. Touch the **[Stamp]** key.
3. Touch the **[Page Numbering]** key and select **[P1,P2...]** or **[1/5,2/5...]**.
   ☛ See pages 78 ~ 82.
4. If you select **[Top to Top]** in step 1, it is recommended that the **[Shift Position]** key is selected (dark). If you select **[Top to Bottom]** in step 1, it is recommended that the **[Shift Position]** key is not selected.



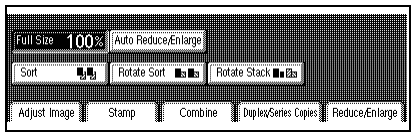
Originals and copies directions when making two-sided copies from one-sided originals

When making two-sided copies from one-sided originals, you can select the orientation (**[Top to Top]**, **[Top to Bottom]**). Referring to the illustration below, select one of them.

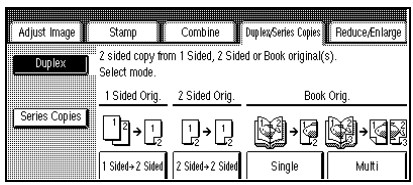
Stapling position	Original setting			Copies
		on the exposure glass	in the document feeder	
[Top to Top]	direction			
	direction			
	direction*			
[Top to Bottom]	direction			
	direction*			
	direction*			

❒ * recommended when your original is larger than B4, 8 1/2" x 14" or larger.

1 Touch the **[Duplex/Series Copies]** key.

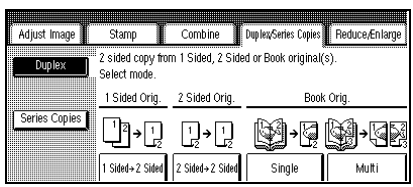


2 Confirm that the **[Duplex]** key is dark. If not, touch the **[Duplex]** key.



3 When you want to make two-sided copies from one-sided originals

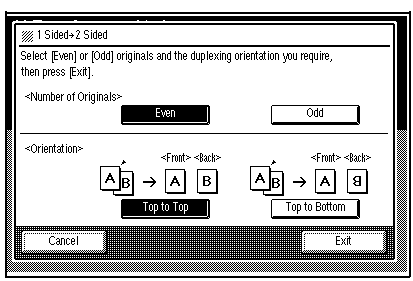
❶ Touch the **[1 Sided → 2 Sided]** key.



❷ Select **[Even]** or **[Odd]** for the number of originals.

❸ Select **[Top to Top]** or **[Top to Bottom]** for the orientation referring to the table on page 57.

❹ Touch the **[Exit]** key.

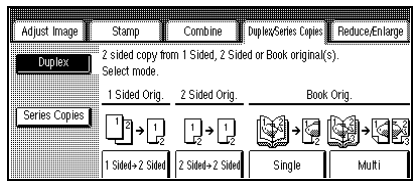


❺ Set your originals (☞ see pages 28 ~ 31) and make your copies.

- ❒ If you set originals in the optional document feeder, the last page should be on the bottom.
- ❒ If you set one original in the optional document feeder at a time, start with the last page to be copied. Follow the procedures on pages 30 ~ 31.
- ❒ If you place originals on the exposure glass, start with the last page to be copied. After setting your original, press the **Enter** or **Start** key following the instructions on the display.

3 When you make two-sided copies from two-sided originals

❶ Touch the **[2 Sided → 2 Sided]** key.

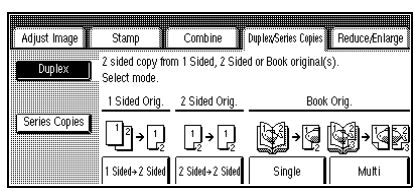


❷ Set your originals (☛ see pages 28 ~ 31) and make your copies.

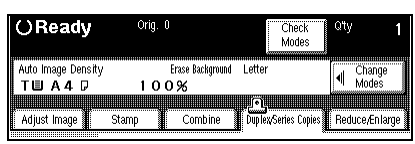
- ❒ If you set originals in the optional document feeder, the last page should be on the bottom.
- ❒ If you set one original in the optional document feeder at a time, start with the last page to be copied. Follow the procedures on pages 30 ~ 31.
- ❒ If you place originals on the exposure glass, start with the last page to be copied. After setting your original, press the **Enter** or **Start** key following the instructions on the display.

3 When you make two-sided copies from book originals (Single, Multi)

❶ Touch the **[Single]** or **[Multi]** key.



❷ Touch the **[Change Modes]** key and select the copy paper size, because Auto Paper Select is canceled.

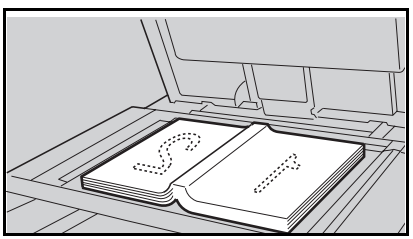


❸ Confirm that the reproduction ratio is appropriate. If not, select the proper ratio by touching the **[Reduce/Enlarge]** key referring to the following table.

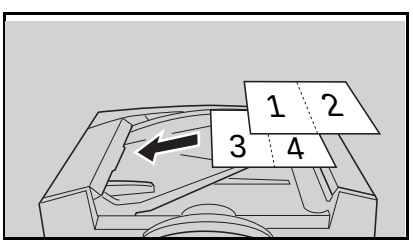
Book original size	Copy paper	Ratio
A3 ▭	A4 ▯	100%
A4 ▭	A4 ▯	141%
11" x 17" ▭	8 1/2" x 11" ▯	100%
8 1/2" x 11" ▭	8 1/2" x 11" ▯	129%

❹ Set your originals. Start with the last page of your book original and work your way to the beginning.

Place the original *face down* on the exposure glass and align the last page with the left scale.



Or, set the facing original in the optional document feeder as shown in the illustration.



❒ If you set originals in the optional document feeder, the last page should be on the bottom.

❒ If you place your original on the exposure glass, or set one original at a time in the document feeder, start with the last page to be copied.

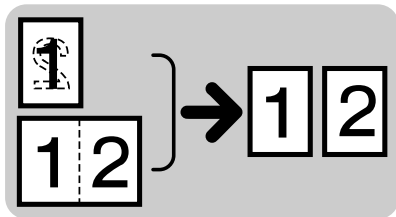
❺ Make your copies by pressing the **Start** key.

❒ If you select the **[Multi]** in step ❶ and set your original on the exposure glass, repeat steps ❹ and ❺ until all originals are finished. To finish your job, press the **Enter** key following the instructions on the display.

❒ If you select the **[Multi]** in step ❶ and set one original at a time in the document feeder in step ❹, press the **Enter** key to finish your job following the instructions on the display.

Making One-sided Copies (Series Copies)

You can make one-sided copies from two facing pages of bound (book) originals and from two-sided originals.

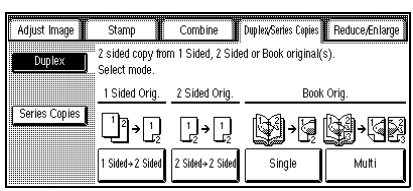


Note: The optional document feeder is required when you select one-sided copies from two-sided originals.

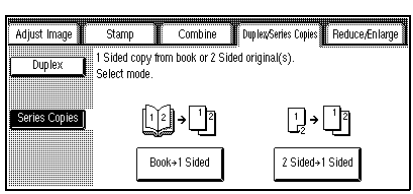
- When making one-sided copies from book originals, the maximum paper size (D only) that can be used is as follows:
  Metric version: A4 D
  Inch version: 8 1/2" x 11" D
- Book → 1 Sided mode does not support different size originals.
- Regarding functions that cannot be used together with this function, see page 103.

1 Touch the **[Duplex/Series Copies]** key.

2 Touch the **[Series Copies]** key.



3 Select the desired mode by touching a key.



4 If you select the **[Book → 1 Sided]** key in step 3, touch the **[Change Modes]** key and select the copy paper size because Auto Paper Select is canceled. Confirm that the reproduction ratio is appropriate. If not, select the proper ratio by touching the **[Reduce/Enlarge]** key. ☛ See the table on page 64.

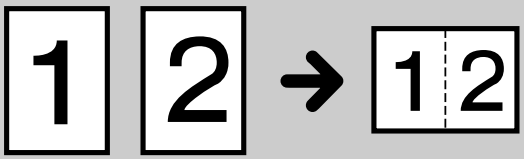
5 Set your originals (☛ see pages 28 ~ 31) and make your copies.

- ❒ If you set originals in the optional document feeder, the last page should be on the bottom. ☛ See the second illustration on page 64.
- ❒ When you set a book original on the exposure glass, start with the last page to be copied aligning it with the left scale. ☛ See the top illustration on page 64.

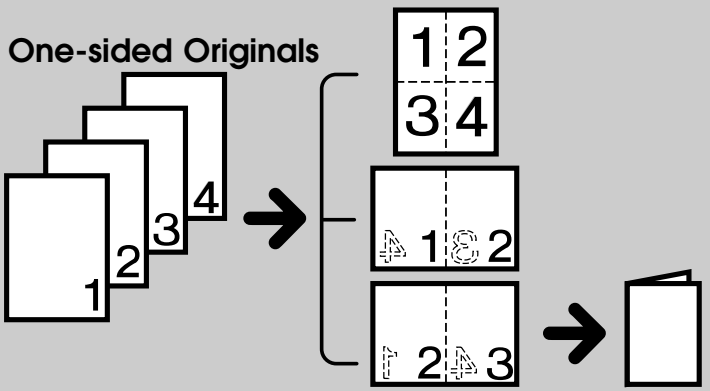
6 Press the **Start** key.

COMBINING ORIGINALS INTO ONE COPY (Combine)

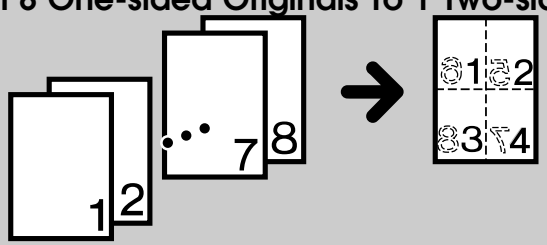
From 2 One-sided Originals To 1 One-sided Copy



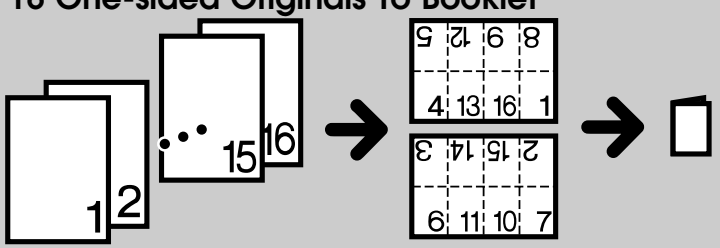
From 4 One-sided Originals



From 8 One-sided Originals To 1 Two-sided Copy

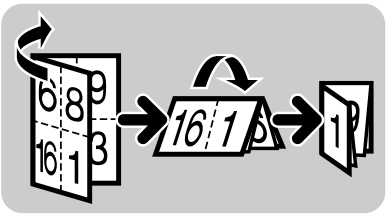


From 16 One-sided Originals To Booklet

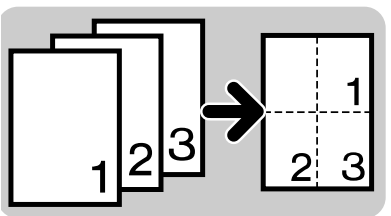


❒ If you want to make a booklet from 16 originals, fold copies as shown in the illustration.

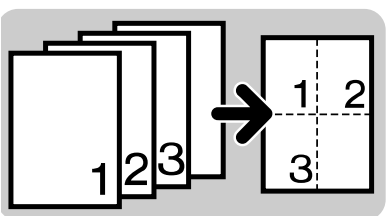
❒ If you want to make a booklet that reads from right to left, change the default setting with the user tools.
☛ See page 120.



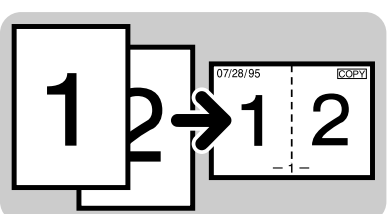
❒ Even if the number of originals in the optional document feeder is less than the number required in the selected mode, copies can be made as shown in the illustration. You can change this setting with the user tools.
☛ See page 126.



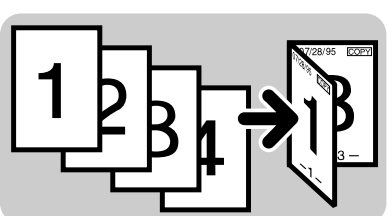
❒ If you add a blank sheet to the bottom of the stack of your originals, the copies can be made as shown in the illustration.



❒ Auto Stamping, Date Stamping and Page Numbering will be copied *one per copy paper* as shown in the illustration. This doesn't apply to Booklet mode.

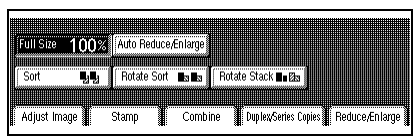


❒ Auto Stamping, Date Stamping and Page Numbering will be copied *one per original* when you make a booklet from 4 or 16 originals as shown in the illustration.



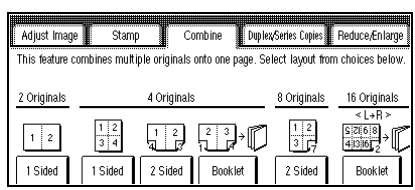
- When you make a booklet from 4 or 16 originals, the maximum paper size that can be used is as follows:
  Metric version: A4
  Inch version: 8 1/2" x 11"
- In this mode, the copier selects the reproduction ratio automatically. This reproduction ratio depends on the original and copy paper sizes as follows:
  Metric version: original: A4, copy paper: A4
  Inch version: original: 8 1/2" x 11", copy paper: 8 1/2" x 11"
- Even if the direction of originals is different from that of copy paper, the copier will automatically rotate the image by 90° to make copies properly.
- The original size is decided when the first original is stored in the memory. So, you cannot use originals containing different sizes and directions together.
- Separation line between originals can be printed using the user tools. ☛ See page 120.
- Regarding functions that cannot be used together with this function, ☛ see page 103.

1 Touch the **[Combine]** key.

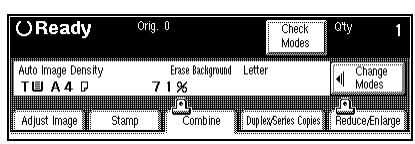


2 Select one of the desired combine modes.

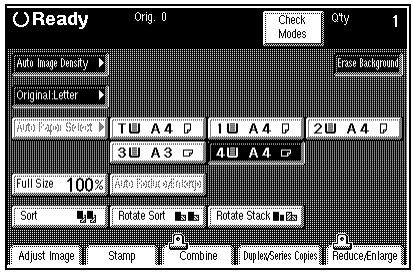
- The suitable reproduction ratio is selected automatically.



3 Touch the **[Change Modes]** key.



4 Select the same size copy paper as the original.



5 When setting one original at a time

❶ Set the original on the exposure glass or in the document feeder (☛ see page 28 or 30). Then press the **Start** key.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green or the **Auto Feed** indicator on the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❸ Repeat step ❷ until all originals are scanned.

❒ If the number of scanned originals is the required number in the selected mode, copying will start automatically.

❹ To finish your copying job, press the **Enter** and **Start** keys following the instructions on the display.

5 When setting a stack of originals in the document feeder

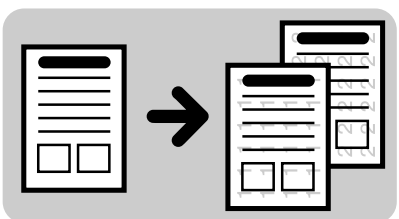
❶ Set a stack of originals (☛ see page 28) in the document feeder and press the **Start** key.

❒ The last page should be on the bottom.

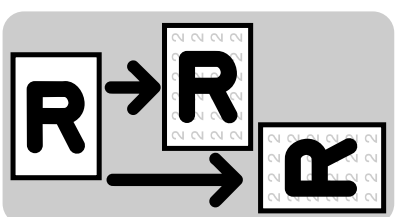
PRINTING ID NUMBERS, PAGE NUMBERS, AND MESSAGES (Stamp)

Printing Numbers On The Background Of Your Copies (Background Numbering)

You can number your copies by printing a number on the background of the copy. This function can help you to keep track of confidential documents.



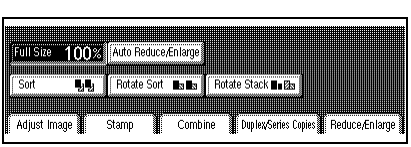
❒ Background Numbering cannot be rotated. For example, if you select Rotate Sort with the Background Numbering, the copies will be as shown in the illustration.



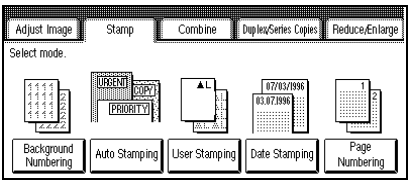
❒ You can change some settings (size, density) of the numbers with the user tools. ☛ See page 126.

❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

1 Touch the **[Stamp]** key.

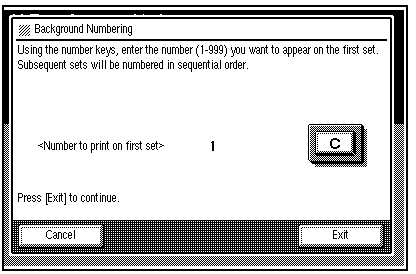


2 Touch the **[Background Numbering]** key.



3 Enter the number you want to print on the first set using the **Number** keys.

❒ To change the entered number, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new number.



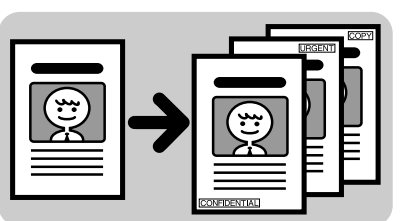
4 Touch the **[Exit]** key.

5 Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

Printing Preset Messages On Your Copies (Auto Stamping) - English Only

NOTE: If your machine is the metric version, this function cannot be used as a default setting. If you want to use this function, contact your sales or service representative.

One of the following seven messages can be stamped on copies.



URGENT, COPY, PRIORITY
PRELIMINARY, CONFIDENTIAL,
For Your Information,
For Internal Use Only

*A frame is printed around the message.

❒ You can change some settings of Auto Stamping (stamping position, size, density) using the user tools. ☛ See pages 122 ~ 123.

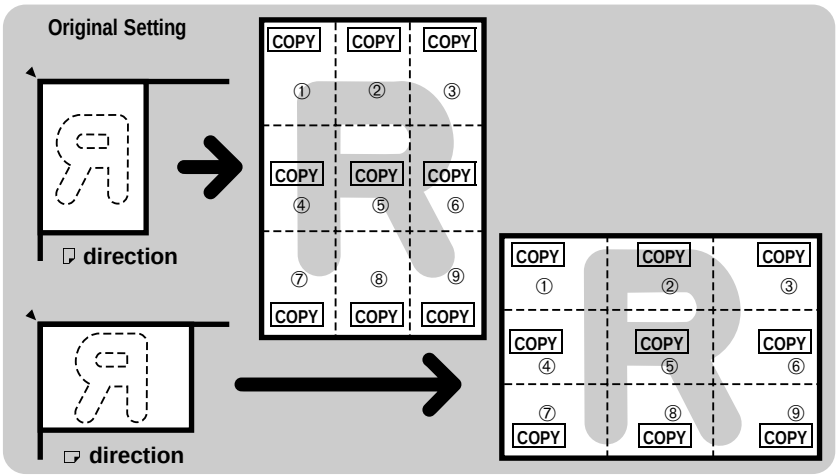
❒ One message can be stamped at a time.

❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

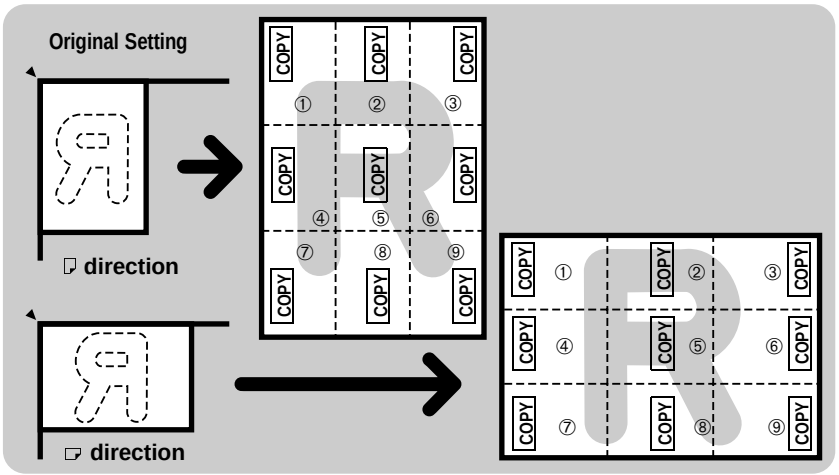
Original setting, stamping position and direction

Key on Display	↖	↑	↗	←	✳	→	↙	↓	↘
Stamping Position	①	②	③	④	⑤	⑥	⑦	⑧	⑨

Direction: Horizontal

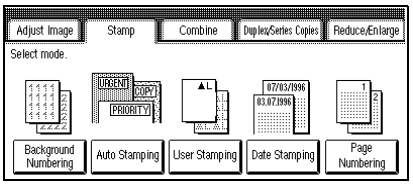


Direction: Vertical

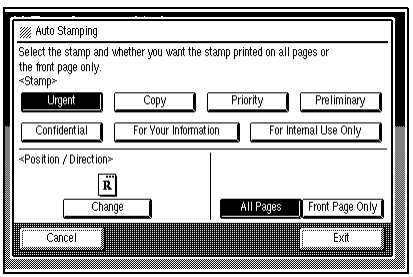


1 Touch the **[Stamp]** key.

2 Touch the **[Auto Stamping]** key.

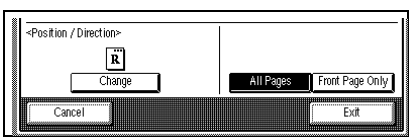


3 Select the desired message by touching a key.

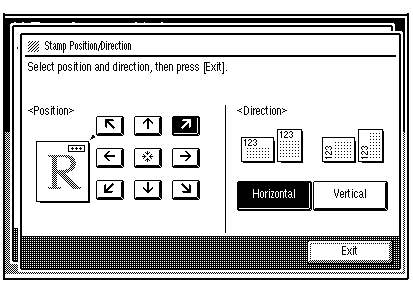


4 If changing the stamping position and direction

❶ Touch the **[Change]** key.

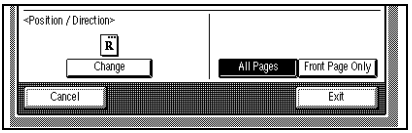


❷ Select the desired position and direction by touching keys. For position and direction, refer to the previous page. Touch the **[Exit]** key.



4 If stamping on the front page only

❶ Touch the **[Front Page Only]** key.

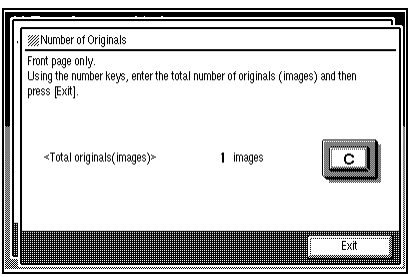


❷ Enter the total number of pages of your originals using the **Number** keys.

❒ Example:
If you have 2 two-sided originals, the number of pages is 4.

❒ When you want to change the entered number, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new number.

❸ Touch the **[Exit]** key.



5 Touch the **[Exit]** key. Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

❒ Start with the last page to be copied.

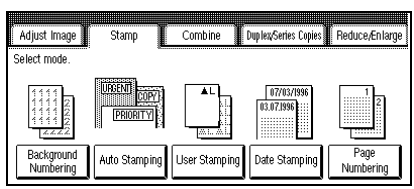
Printing Your Own Messages On Your Copies (User Stamping)

Up to four messages which you use frequently can be stored in the machine's memory. You can make copies with your message stamped.

- ❒ Before using this function, you have to store your messages using the user tools. ☛ See page 128.
- ❒ You can change some settings of User Stamping using the user tools. ☛ See page 124.
- ❒ Regarding original setting, stamping position and stamping direction, ☛ see page 73.
- ❒ One message can be stamped at one time.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

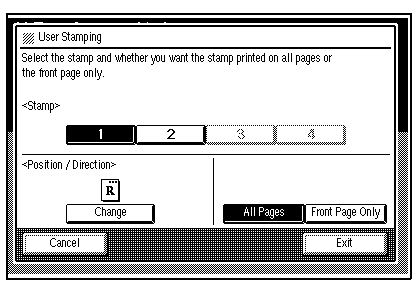
1 Touch the **[Stamp]** key.

2 Touch the **[User Stamping]** key.



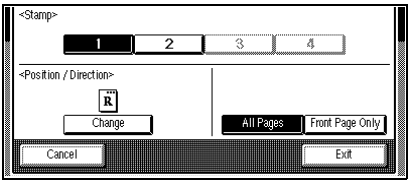
3 Select the desired number where your message is stored by touching a key.

- ❒ Keys with no stored message cannot be selected. In the illustration, user stamps 1 and 2 have been stored.



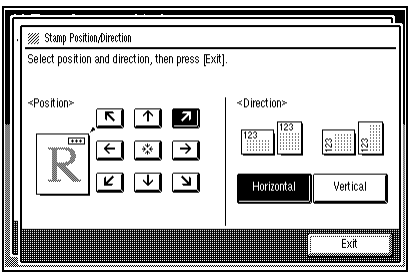
4 If changing the stamping position and direction

❶ Touch the **[Change]** key.



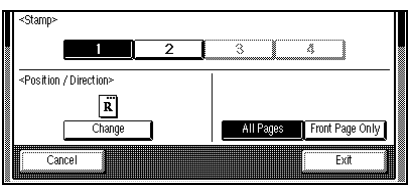
❷ Select the desired position and direction by touching keys. For position and direction, ☛ see page 73.

❸ Touch the **[Exit]** key.



4 If stamping on the front page only

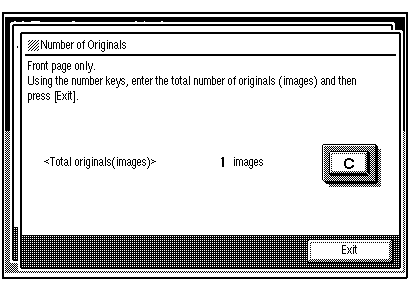
❶ Touch the **[Front Page Only]** key.



❷ Enter the number of your originals using the **Number** keys.

❒ When you want to change the number entered, touch the **[C]** key or press the **Clear/Stop** key. Then, enter the new number.

❸ Touch the **[Exit]** key.

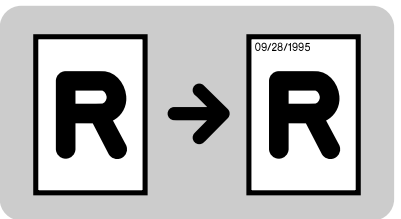


5 Touch the **[Exit]** key.

6 Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

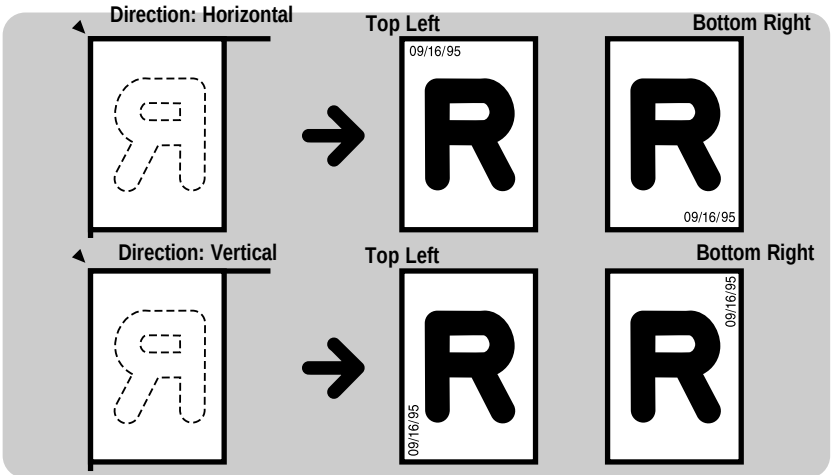
Printing Dates And Page Numbers (Date Stamping, Page Numbering)

Date Stamping



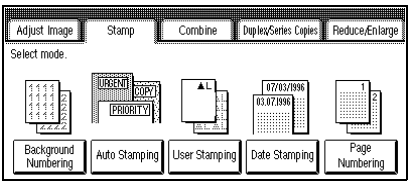
- ❒ You can change the settings of Date Stamping with the user tools. ☛ See page 124 ~ 125.
- ❒ If you select Date Stamping and Page Numbering together, the last stamping direction selected takes priority.
- ❒ Regarding copies in Date Stamping and Combine mode, ☛ see page 68.
- ❒ The size and fonts of Date Stamping cannot be changed.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

Original setting, stamping position and direction

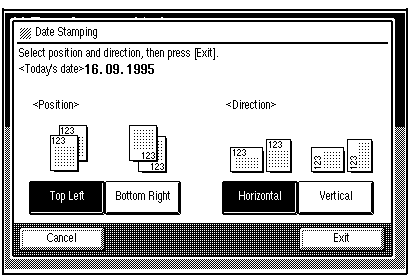


1 Touch the **[Stamp]** key.

2 Touch the **[Date Stamping]** key.



3 Select the desired direction and position of Date Stamping using the keys on the display. Regarding position and direction, ☛ see previous page.

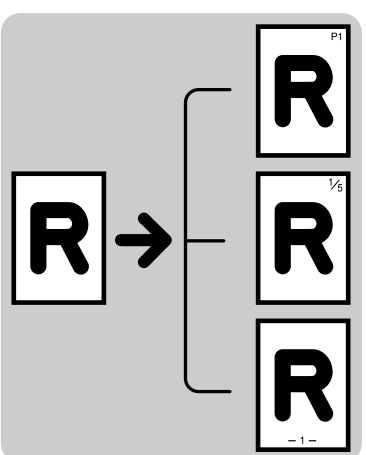


4 Touch the **[Exit]** key.

5 Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

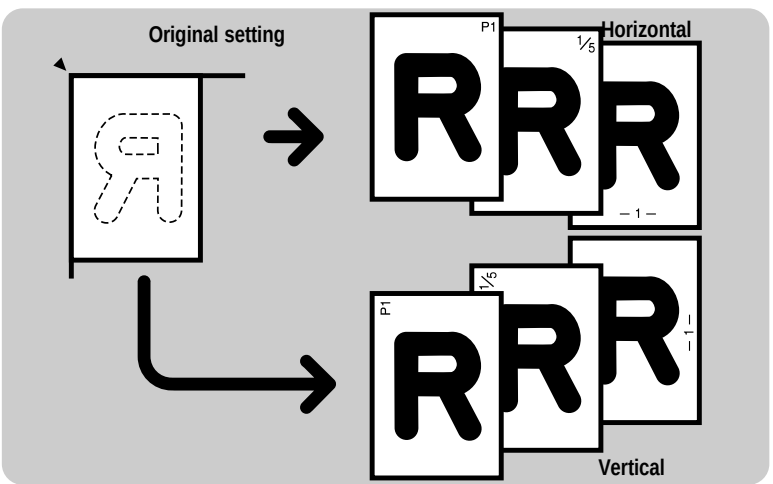
Page Numbering

You can print page numbers on your copy. There are three types of page numbering (P1, P2..., 1/5, 2/5..., or -1-, -2-...)

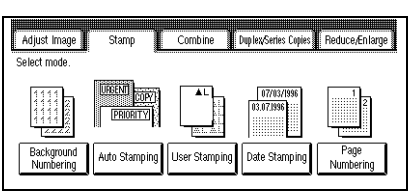


- ❒ You can change the settings of page numbering with the user tools. ☛ See pages 120 ~ 121.
- ❒ If you select Date Stamping and Page Numbering together, the last stamping direction selected takes priority.
- ❒ Regarding copies in Page Numbering and Combine mode, ☛ see page 64.
- ❒ If you select Stapling (**[Top]**) and Page Numbering (**[P1, P2...]** or **[1/5, 2/5...]**) together when making two-sided copies, page numbers and staple position might overlap. To avoid this, do the procedure described on page 60.
- ❒ The size and font of Page Numbering cannot be changed.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

Original setting, stamping position and direction

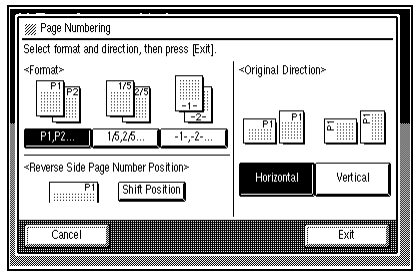


1. Touch the **[Stamp]** key.
2. Touch the **[Page Numbering]** key.



3 Select the desired format and orientation by touching the keys on display. Then, touch the **[Exit]** key.

❒ Regarding the **[Shift Position]** key, ☛ see page 60.

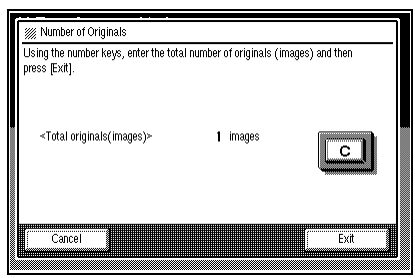


4 If you selected (*P1, P2...*) or (*-1-,-2-...*) in step 3

❶ Enter the total page number of originals using the **Number** keys.

❒ To change the number entered, touch the **[C]** key or press the **Clear/Stop** key, and then enter a new number.

❷ Touch the **[Exit]** key.



☛ **Go to step 5**

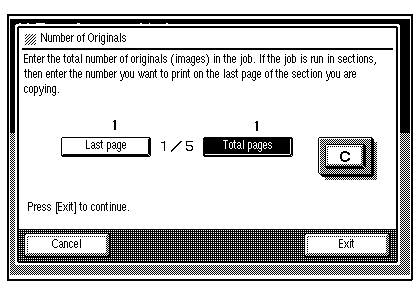
4 If you selected (*1/5,2/5...*) in step 3

❶ Confirm that the **[Total pages]** key is dark. If not, touch it. Enter the total number of originals using the **Number** keys.

❒ To change the number entered, touch the **[C]** key or press the **Clear/Stop** key, and then enter a new number.

❷ Touch the **[Exit]** key.

❒ Regarding **[Last page]** key, ☛ see page 82.


Number of Originals
Enter the total number of originals (images) in the job. If the job is run in sections, then enter the number you want to print on the last page of the section you are copying.
1
1
Last page
1 / 5
Total pages
C
Press [Exit] to continue.
Cancel
Exit

☛ **Go to step 5**

[Last page] key

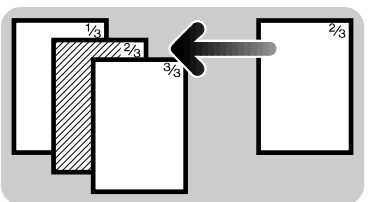
In most cases, it is not necessary to input the data for this key. Use this key for the following conditions:

❒ Example 1: If you want to make an insertion into a completed copy set (in this case 2/3)

❶ Enter "3" for the **[Total pages]** key.

❷ Enter "2" for the **[Last page]** key.

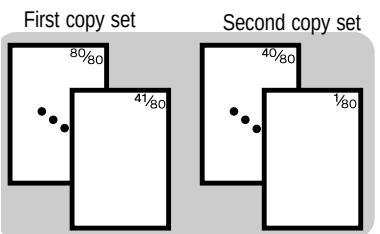
❸ Using the original for 2/3 page, make your copy.



❒ Example 2: If you have 80 originals, and want to make copies using 40 originals at a time.

❶ Set 80 ~ 41 pages of originals. Enter "80" for the **[Total pages]** key, and make your copies.

❷ Set 40 ~ 1 pages of originals. Enter "80" for the **[Total pages]** key. Enter "40" for the **[Last page]** key, and make your copies.



5 When setting one original at a time

❶ Set an original on the exposure glass or in the optional document feeder (☛ see pages 28 or 30). Then, press the **Start** key.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green or the **Auto Feed** indicator of the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❸ Repeat step ❷ until your copying is finished.

5 When setting a stack of originals in the document feeder

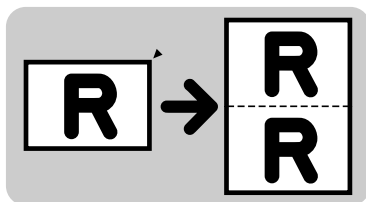
❶ Set a stack of originals in the document feeder (☛ see page 28), then press the **Start** key.

❒ Last page should be on the bottom.

EDITING THE COPY IMAGE (Adjust Image)

Copying The Image Twice On One Page (Double Copies)

The one original image is copied twice on one copy as shown in the illustration. The separation line is copied in broken line.



- You can change the type of separation line or delete it with the user tools. ☛ See page 119.
- Please refer to the following table when you select original and copy paper sizes with 100% ratio:

Metric version:

Original	**Copy paper**
A5 ⊐	A4 ▯
B6 ⊐	B5 ▯

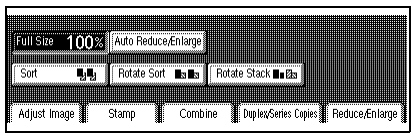
Inch version:

Original	**Copy paper**
5 1/2" x 8 1/2" ⊐	8 1/2" x 11" ▯

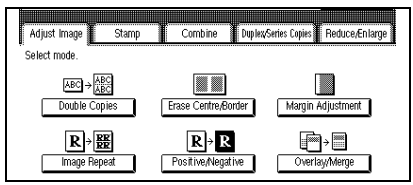
- It is impossible to turn lengthwise (⊐) original images 90° on lengthwise (⊐) copy paper. In this case, select ▯ copy paper referring to the above table.
- A5 ⊐, B6 ⊐ and 5 1/2" x 8 1/2" ⊐ originals cannot be detected properly on the exposure glass. Make sure to select the copy paper manually or set the originals in the optional document feeder. This setting can be changed by your service representative. ☛ See "SERVICE REPRESENTATIVE SETTINGS" IN the "General Reference".
- Regarding functions that cannot be used together with this function, ☛ see page 103.

1 Confirm that the **[Auto Paper Select]** and **[Full Size]** keys are dark.

2 Touch the **[Adjust Image]** key.



3 Touch the **[Double Copies]** key.



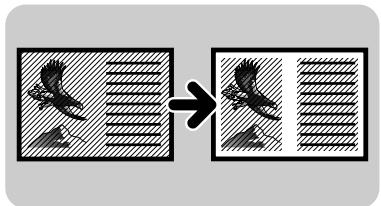
4 Set your originals in the optional document feeder (☛ see page 25).

❒ If your original is A5 ⊐, B6 ⊐ or 5 1/2" x 8 1/2" ⊐ and you do *not* set your originals in the document feeder, select the copy paper manually before making copies by touching the **[Change Modes]** key.

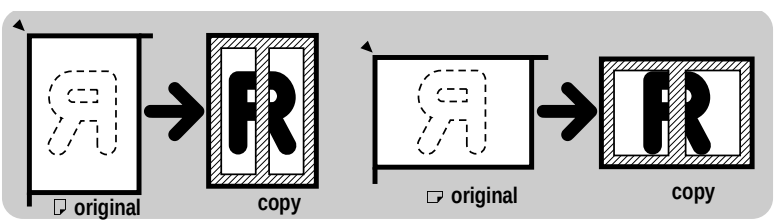
5 Press the **Start** key.

Erasing The Centre And The Border (Erase Centre/Border)

This function erases the centre and/or all four sides of the original image, such as book originals.



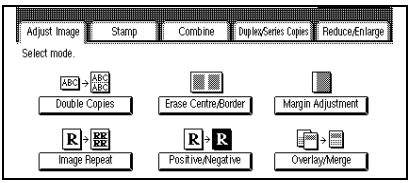
- The default setting of the erased margin is as follows. You can change this setting using the user tools. ☛ See page 119.
  Metric version: 10 mm
  Inch version: 0.4"
- The position of the margin to be erased is determined according to the original size and reproduction ratio. If your original is non-standard size, undesired areas might be erased.



- If you select copy paper manually, make sure to select the same direction as that of your original.
- Regarding functions that cannot be used together with this function, ☛ see page 103.

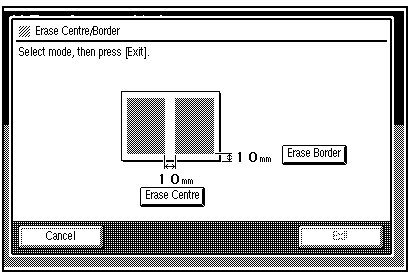
1 Touch the **[Adjust Image]** key.

2 Touch the **[Erase Centre/Border]** key.



3 Select keys.

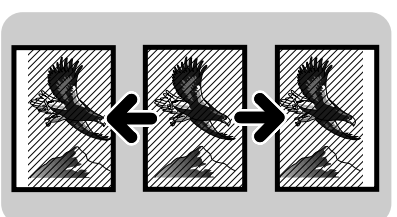
4 Touch **[Exit]** key.



5 Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

Adjusting The Margin (Margin Adjustment)

You can shift the image either left or right to make a binding margin.



❒ The margin width default is as follows. You can change this setting using the user tools. ☛ See page 114.

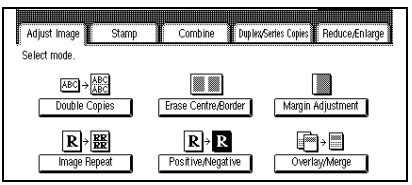
Metric version: 5 mm
Inch version: 0.2"

❒ Margin for two-sided copies (orientation: Top to Top):
For copies that read from left to right, set the front left and back right margins.
For copies that read from right to left, set the front right and back left margins.

- ❒ When you make two-sided copies from one sided originals, a right margin 5 mm (0.2") is set on the back side automatically as a default setting. You can change this setting using the user tools. ☛ See page 119.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

1 Touch the **[Adjust Image]** key.

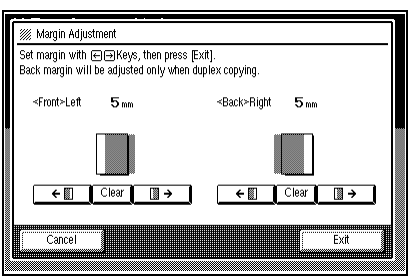
2 Touch the **[Margin Adjustment]** key.



3 Set the margin width by touching the right or left arrow key.

- ❒ To clear the width entered, touch the **[Clear]** key.

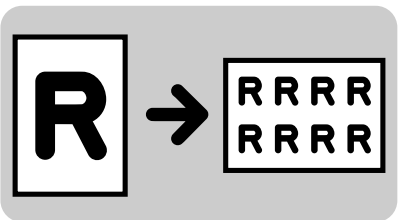
4 Touch the **[Exit]** key.



5 Set your original (☛ see pages 28 ~ 31) and press the **Start** key.

Repeating An Image Over The Entire Copy (Image Repeat)

The original image is copied repeatedly.



❒ The number of repeated images depends on the original size, copy paper size, and reproduction ratio. Refer to the following table.

Metric version:

Original size	Copy Paper Size	Reproduction ratio and number of repeat image
A5 ▯	A4 ▯	71% → 4 images
A5 ▭	A4 ▭	35% → 16 images
A5 ▯	A4 ▭	100% → 2 images 50% → 8 images 25% → 32 images
A5 ▭	A4 ▯	

Inch version:

Original size	Copy Paper Size	Reproduction ratio and number of repeat image
5 1/2" x 8 1/2 " ▯	8 1/2" x 11" ▯	65% → 4 images
5 1/2" x 8 1/2" ▭	8 1/2" x 11" ▭	32% → 16 images
5 1/2" x 8 1/2" ▯	8 1/2" x 11" ▭	100% → 2 images 50% → 8 images 25% → 32 images
5 1/2" x 8 1/2" ▭	8 1/2" x 11" ▯	

❒ Separate lines between repeated images can be printed using the user tools. ☛ See page 120.

❒ Part of a repeated image might not be copied depending on copy paper size, copy paper direction, or reproduction ratio.

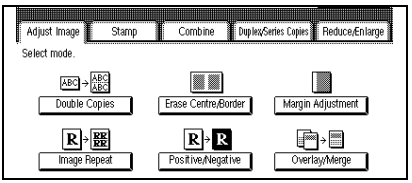
❒ If your original is non-standard size, the copier might not detect the original size correctly. It is recommended to use originals of standard size.

❒ The copying speed might be slower in this mode.

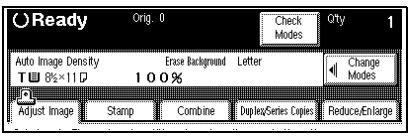
❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

1 Touch the **[Adjust Image]** key.

2 Touch the **[Image Repeat]** key.



3 Touch the **[Change Modes]** key.



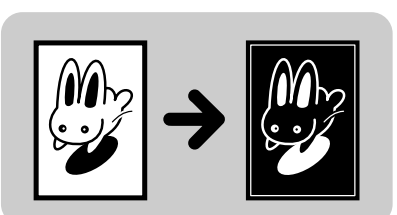
4 Select the copy paper size by touching a key referring to the table on the previous page.

5 Select the reproduction ratio by touching the **[Reduce/Enlarge]** key referring to the table on the previous page.

6 Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

Reversing Black and White (Positive/Negative)

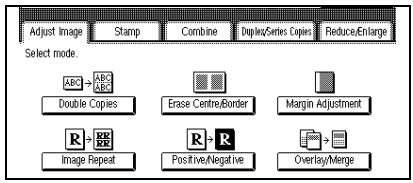
Black and white images of the original are reversed.



❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

1 Touch the **[Adjust Image]** key.

2 Touch the **[Positive/Negative]** key.

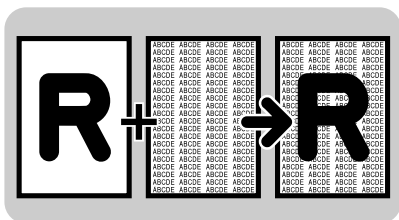


3 Set your originals (☛ see pages 28 ~ 31) and press the **Start** key.

Merging Images (Overlay/Merge)

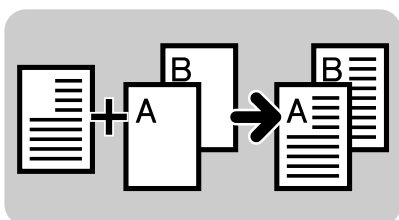
Making 1 image from 2 (Overlay)

Two different originals can be merged onto the same copy paper.



Merging a template into several copies (Copy Merge)

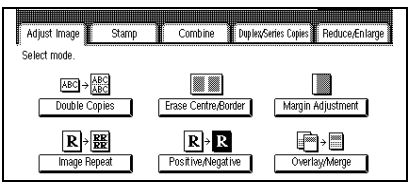
The image of the original which is copied *first* will be a background image (master) on all copies. Then, the *remaining* originals which follow the first one will be copied with the background.



- ❒ The copying speed might be slower in this mode.
- ❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

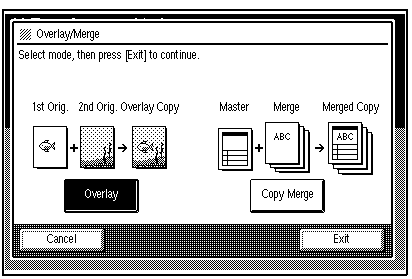
1 Touch the **[Adjust Image]** key.

2 Touch the **[Overlay/Merge]** key.



3 Select the **[Overlay]** or **[Copy Merge]** key.

4 Touch the **[Exit]** key.



5 When setting one original at a time

❶ Set an original on the exposure glass or in the optional document feeder (☛ see page 28 or 30). Then, press the **Start** key.

❒ When you select the **[Copy Merge]** in step 3, the original for the template (master) should be read first.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green or the **Auto Feed** indicator of the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❸ Repeat step ❷ until your copying is finished.

❒ To clear the template (master), or finish your copying, press the **Enter** key.

5 When setting a stack of originals in the document feeder

❶ Set a stack of originals (☛ see page 28) in the document feeder and press the **Start** key.

❒ When you select the **[Copy Merge]** in step 3, the original for the template (master) should be on the bottom.

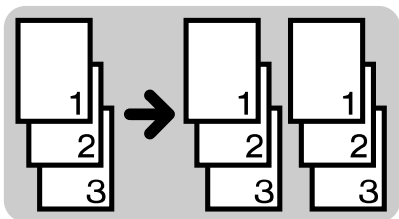
❒ The last page should be on the bottom.

❒ To clear the template (master) or finish your copying, press the **Enter** key.

OPTIONAL FINISHING

Sorting Into Sets With Finisher (123,123,123) (Sort)

Copies can be assembled as sets in sequential order by sliding the shift tray from side to side.



Note: This function can be used only when your machine is equipped with the optional finisher.

Notes for Sort mode

- ❒ You can make up to 999 copy sets at a time. However, when the number of copies exceeds the capacity of the shift tray, remove copies from the copy tray. Regarding the capacity of finisher, ☛ see the table on page 94.
- ❒ Different size originals can be used only when you make one-sided copies from one-sided originals.
- ❒ After starting copying, the only setting you may change is image density, The change will apply from the next copy. ☛ See page 36.
- ❒ The maximum number of pages that can be stored is as follows:
  A4, 8 1/2" x 11": Approximately 100 pages (images)
- ❒ You can change settings of this mode using the user tools. ☛ See page 127.
- ❒ When you make two-sided copies, the maximum number of copies stacked in the duplex unit at a time is limited. For details, ☛ see page 44.

❒ For this finisher, the following limitations apply:

Metric version

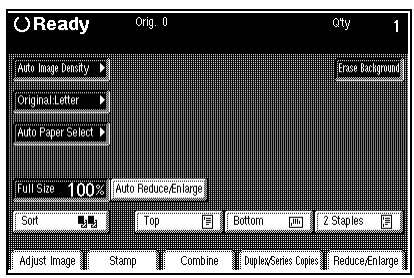
Paper size		Paper weight		Maximum capacity
Maximum	Minimum	Maximum	Minimum	A4 or smaller: 1,500 sheets B4 or larger: 1,000 sheets
A3	A5	157 g/m2	52 g/m2	

Inch version

Paper size		Paper weight		Maximum capacity
Maximum	Minimum	Maximum	Minimum	8 1/2" x 11" or smaller: 1,500 sheets 8 1/2" x 14" or larger: 1,000 sheets
11" x 17"	5 1/2" x 8 1/2"	42 lb	14 lb	

❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

1 To select Sort mode, touch the **[Sort]** key.



2 Enter the number of copies required using the **Number** keys.

3 **When setting one original at a time**

❶ Set an original on the exposure glass or in the optional document feeder (☛ see pages 28 or 30). Then press the **Start** key. The copier starts memorizing the original image.

❒ Start with the last page to be copied.

❷ When the **Start** key turns green, or the **Auto Feed** indicator of the document feeder is lit, set the next original. If you have set the original on the exposure glass in step ❶, press the **Start** key.

❒ Set the original in the same direction as step ❶.

❒ When the memory capacity reaches 0%, the copier stops memorizing. Press the **Start** key to finish copy jobs which are already in memory. After that, follow the instructions on the display.

❸ Repeat step ❷ until all originals are scanned.

❹ After all originals are put into memory, press the **Enter** key.

❺ Press the **Start** key.

❒ If you want to stop storing images or to delete stored images, ☛ see page 45.

❒ If you make one-sided copies, the first set of copies has been completed when all originals are stored in memory.

3 When setting a stack of originals in the document feeder

❶ Set a stack of the originals in the document feeder (☛ see page 28), then press the **Start** key.

❒ Last page should be on the bottom.

❒ When memory runs out during copying, the machine can be programmed to behave in two ways with the user tools.

- ♦ Memory Full Auto Scan Restart = **[Yes]**
  → After all images in memory are copied, the machine will re-start scanning automatically.
  You should re-order your copies after all copy jobs are finished.

- ♦ Memory Full Auto Scan Restart = **[No]**
  → The machine will wait for you to press the **Start** key. At this point you should remove your copies from the copy tray. Press the **Start** key and then follow the instructions on the display to continue copying.

If you want to change the user tools setting, ☛ see page 127.

❒ If you want to stop storing images or to delete stored images, ☛ see page 45.

Stapling With Finisher (Staple)

Note: This function can be used only when your machine is equipped with the optional finisher.

❒ For this mode, the following limitations apply:

Metric version:

Paper size		Paper weight		Stapler capacity	Shift tray capacity
Maximum	Minimum	Maximum	Minimum	A4 or smaller: from 2 to 50 sheets B4 or larger: from 2 to 30 sheets	A4: 1,500 sheets (30 sets of 50 sheets) A3: 1,000 sheets
A3	B5	80 g/m^2	64 g/m^2		

Inch version

Paper size		Paper weight		Stapler capacity	Shift tray capacity
Maximum	Minimum	Maximum	Minimum	8 1/2"x11" or smaller: from 2 to 50 sheets 8 1/2"x14" or larger: from 2 to 30 sheets	8 1/2"x11": 1,500 sheets (30 sets of 50 sheets) 11"x17": 1,000 sheets
11" x 17"	8 1/2" x 11"	21 lb	17 lb		

❒ Post cards, tracing paper, OHP sheets, and adhesive labels, and paper that is curled or has low stiffness cannot be used.

❒ If the number of copies is over the stapler capacity, the copies will be delivered to the shift tray without stapling.

❒ If memory reaches 0% during copying, the copies will be delivered to the shift tray without stapling.

❒ If "Add Staples" is displayed during copying, copies might be delivered to the shift tray without stapling.

❒ Copy paper with different sizes and directions cannot be stapled.

❒ Regarding functions that cannot be used together with this function, ☛ see page 103.

Stapling Position And Original Setting

Single staple in the top left corner in Auto Paper Select

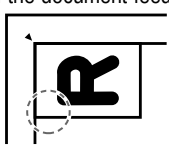
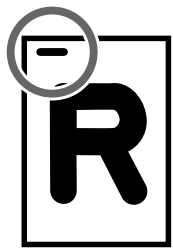
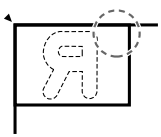
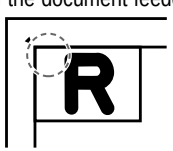
If you select Stapling with the Auto Paper Select and there is no paper that matches the direction of originals, the copier automatically rotates the copy image. As a result, you can get copies stapled in the left upper corner.

- The maximum original image size that can be rotated is as follows:
  Metric version: A4
  Inch version: 8 1/2" x 11"
- The copy image cannot be rotated if you select **[2 Staples]**.

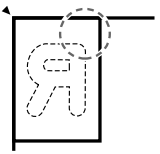
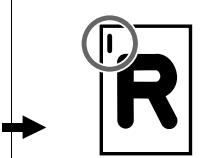
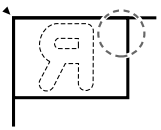
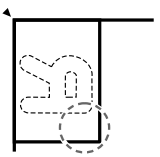
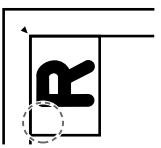
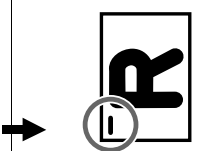
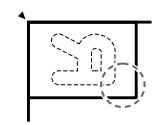
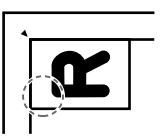
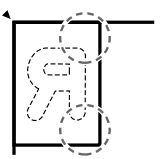
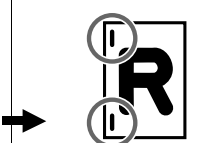
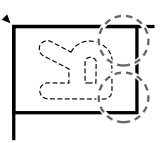
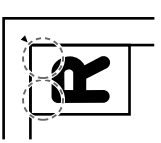
If your original is A4, 8*1/2" x 11"*, set originals and select the **[Top]** key to get copies stapled at the left upper corner.

Stapling position	Original	Original setting	Stapled copies
[Top]	↓ direction	on the exposure glass	When the image is *not* rotated.
		in the document feeder	When the image is rotated.
	→ direction	on the exposure glass	When the image is *not* rotated.
		in the document feeder	When the image is rotated.

❒ If your original is *larger than A4, 8 1/2" x 11",* (ex. or 11" x 17"), the original image cannot be rotated. In this case, set original and select the [Top] or [Bottom] keys as shown to get copies stapled at the left upper corner.

Stapling position		Original setting	Stapled copies
[Bottom]	If your original is portrait direction.	on the exposure glass in the document feeder 	
[Top]	If your original is landscape direction.	on the exposure glass  in the document feeder 	

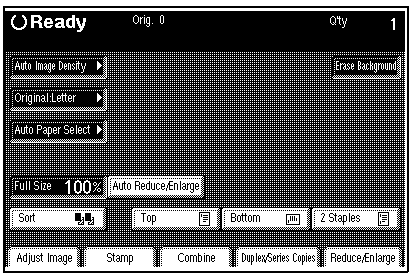
Stapling positions *when there is copy paper that is identical in size and direction as your original*

Stapling position	Original setting			Copies
		on the exposure glass	in the document feeder	
[Top]	direction			
	direction			
[Bottom]	direction			
	direction*			
[2 Staples]	direction			
	direction*			

❒ * recommend when your original is larger than B4, 8 1/2" x 14" or larger.

When Setting One Original At A Time

1. Select one of three stapling by touching a key.



2. Set an original on the exposure glass or in the optional document feeder. (☛ See pages 28 or 30.) Then, press the **Start** key. The copier starts memorizing the original images.

❒ Start with the last page to be copied.

3. When the **Start** key turns green, or the **Auto Feed** indicator of the document feeder is lit, set the next original. If you have set the original on the exposure glass in step 2, press the **Start** key.

❒ Set the original at the same direction in step 2.

4. Repeat step 3 until all originals are scanned.

5. After all originals are put into memory, press the **Enter** key.

6. Follow the instructions on the display. In some cases, you must press the **Start** key.

When Setting A Stack Of Originals In The Document Feeder

1. Select one of three stapling by touching a key.

2. Set a stack of originals in the document feeder (☛ see page 28) , then press the **Start** key.

❒ The last page should be on the bottom.

Sorting Into Sets With 3-bin Sorter (123, 123, 123) (Sort, Rotate Sort)

Note: This function can be used only when your machine is equipped with the optional 3-bin sorter.

❒ For this mode, the following limitations apply:

Metric version (when copies exits face up)

Bin	Paper size		Paper weight		Maximum capacity*
	Maximum	Minimum	Maximum	Minimum	
1st	A3	A6 ⊐	157 g/m2	52 g/m2	A4 : 500 sheets A3 : 250 sheets
2nd, 3rd	A3	A6 ⊐	105 g/m2	52 g/m2	250 sheets

(* paper weight: 64 ~ 80 g/m2)

Inch version (when copies exits face up)

Bin	Paper size		Paper weight		Maximum capacity*
	Maximum	Minimum	Maximum	Minimum	
1st	11" x 17"	5 1/2" x 8 1/2" ⊐	42 lb	14 lb	8 1/2" x 11" : 500 sheets 11" x 17" : 250 sheets
2nd, 3rd	11" x 17"	5 1/2" x 8 1/2" ⊐	28 lb	14 lb	250 sheets

(* paper weight: 17 ~ 20 lb)

The operation in this mode is the same as one in Sort or Rotate Sort mode. For details, ☛ see page 43.

❒ Copies will be delivered to the 1st bin. You can change this setting using the user tools. ☛ See "USER TOOLS" in the "General Reference".

Stacking Together All Copies Of A Page with 3-bin Sorter (111, 222, 333) (Rotate Stack)

Note: This function can be used only when your machine is equipped with the optional 3-bin sorter.

For this mode, the following limitations apply:

Metric version (when copies exits face up)

Bin	Paper size		Paper weight		Maximum capacity*
	Maximum	Minimum	Maximum	Minimum	
1st	A3	A6 ⊐	157 g/m2	52 g/m2	A4 : 500 sheets A3 : 250 sheets
2nd, 3rd	A3	A6 ⊐	105 g/m2	52 g/m2	250 sheets

(* paper weight: 64 ~ 80 g/m2)

Inch version (when copies exits face up)

Bin	Paper size		Paper weight		Maximum capacity*
	Maximum	Minimum	Maximum	Minimum	
1st	11" x 17"	5 1/2" x 8 1/2" ⊐	42 lb	14 lb	8 1/2" x 11" : 500 sheets 11" x 17" : 250 sheets
2nd, 3rd	11" x 17"	5 1/2" x 8 1/2" ⊐	28 lb	14 lb	250 sheets

(* paper weight: 17 ~ 20 lb)

The operation in this mode is the same as one in Rotate Stack mode. For details, ☛ see page 46.

❒ Copies will be delivered to the 1st bin. You can change this setting using the user tools. ☛ See page "USER TOOLS" in the "General Reference".

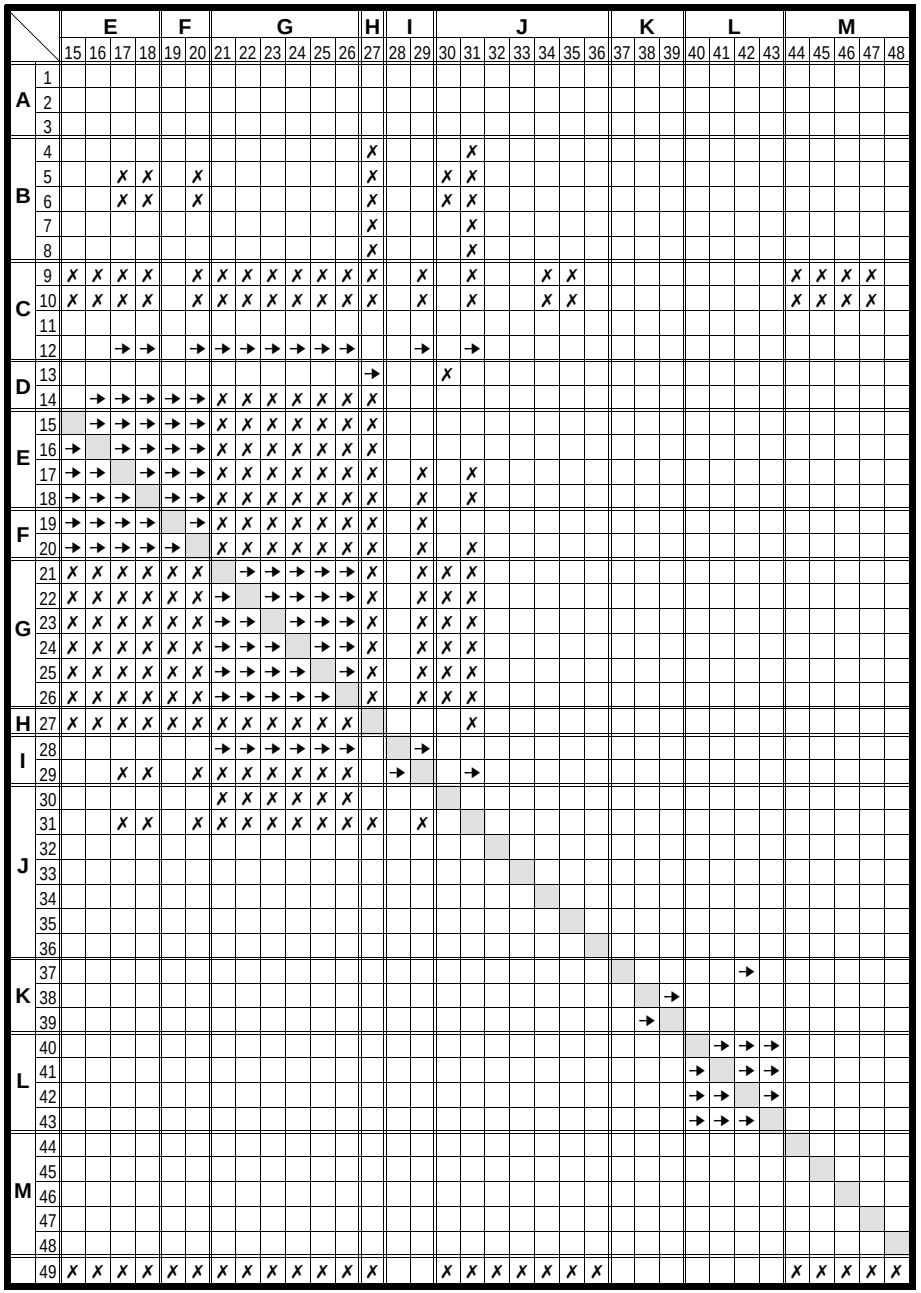
COMBINATION CHART

❒ The combination chart on pages 104 and 105 shows which modes can be used together. When you read the chart, please refer to the following tables.

BLANK CELL	means that these modes can be used together.
→	means that the mode after you select will be the mode you're working in.
✗	means that these modes cannot be used together.

A	Setting originals
B	Finishing
C	Selecting copy paper
D	Image Rotation
E	[Duplex]
F	[Series Copies]
G	[Combine]
H	[Overlay/Merge]
I	[Reduce/Enlarge]
J	[Adjust Image]
K	Adjusting image density
L	Selecting original setting
M	[Stamp]

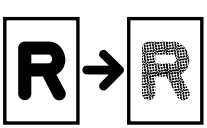
Mode before you select \ Mode after you select			A			B					C				D	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
A	1	Setting original on the exposure glass		→	→											
	2	Setting an original in the DF (SADF)	→		→											
	3	Setting a stack of originals in the DF (ADF)	→	✗												
B	4	Sort					→	→			✗	✗				
	5	Rotate Sort(with& without optional 3-bin sorter)				→		→			✗	✗				
	6	Rotate Stack(with& without optional 3-bin sorter)				→	→				✗	✗				
	7	Sort with optional finisher								→	✗	✗				
	8	Staple with optional finisher							→		✗	✗				
C	9	Using the bypass tray (standard size)				✗	✗	✗	✗	✗		→	→	→	→	✗
	10	Using the bypass tray (non-standard size)				✗	✗	✗	✗	✗	→		→	→	→	✗
	11	Selecting paper size manually									→	→		→	→	
	12	Auto Paper Select									→	→	→			
D	13	Image Rotation in Auto Paper Select									→	→	→			
	14	Image Rotation in Duplex									✗	✗				
E	15	one-sided → two-sided									✗	✗				
	16	two-sided → two-sided									✗	✗				→
	17	Single (from book original)					✗	✗			✗	✗		✗	✗	→
	18	Multi (from book original)					✗	✗			✗	✗		✗	✗	→
F	19	two-sided → one-sided														→
	20	Book → one-sided					✗	✗			✗	✗		✗	✗	→
G	21	2 one-sided → 1 one-sided (2 in 1)									✗	✗		✗	✗	✗
	22	4 one-sided → 1 one-sided (4 in 1)									✗	✗		✗	✗	✗
	23	4 one-sided → 1 two-sided (4 in 1)									✗	✗		✗	✗	✗
	24	8 one-sided → 1 two-sided (8 in 1)									✗	✗		✗	✗	✗
	25	4 one-sided → booklet (4 in 1)									✗	✗		✗	✗	✗
	26	16 one-sided → booklet (16 in 1)									✗	✗		✗	✗	✗
H	27	Overlay/Merge				✗	✗	✗	✗	✗	✗	✗				✗
I	28	Reducing/Enlarging														
	29	Auto Reduce/Enlarge									✗	✗		→	→	
J	30	Double Copies					✗	✗							✗	
	31	Image Repeat				✗	✗	✗	✗	✗	✗	✗		✗	✗	
	32	Erase Centre														
	33	Erase Border														
	34	Margin Adjustment for front side									✗	✗				
	35	Margin Adjustment for back side									✗	✗				
	36	Positive/Negative														
K	37	Erase Background														
	38	Auto Image Density														
	39	Manual Image Density														
L	40	Letter mode														
	41	Letter/Photo mode														
	42	Photo mode														
	43	Generation Copy mode														
M	44	Auto Stamping									✗	✗				
	45	User Stamping									✗	✗				
	46	Date Stamping									✗	✗				
	47	Page Numbering									✗	✗				
	48	Background Numbering														
	49	Interrupt Copying				✗	✗	✗	✗	✗					✗	✗


E
F
G
H
I
J
K
L
M
15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
A 1 2 3
B 4 5 6 7 8
C 9 10 11 12
D 13 14
E 15 16 17 18
F 19 20
G 21 22 23 24 25 26
H 27
I 28 29
J 30 31 32 33 34 35 36
K 37 38 39
L 40 41 42 43
M 44 45 46 47 48
49

WHAT TO DO IF SOMETHING GOES WRONG

IF YOU CANNOT MAKE CLEAR COPIES 108
IF YOU CANNOT MAKE COPIES AS YOU WANT 109

IF YOU CANNOT MAKE CLEAR COPIES

Problem	Cause	Action
Copies appear dirty.	The image density is too dark.	Adjust the image density. ☛ See page 36.
	Erase Background is not selected.	Confirm that the **[Erase Background]** key is dark. If not, touch it.
	The platen cover, exposure glass, or document feeder belt is dirty.	Clean them. ☛ See "MAINTAINING YOUR MACHINE" in the "General Reference".
The reverse side of an original image is copied.	The image density is too dark.	Adjust the image density. ☛ See page 36.
	Erase Background is not selected.	Confirm that the **[Erase Background]** key is dark. If not, touch it.
Copies are too light.	The original has a low contrast image.	Adjust the image density. ☛ See page 36.
	The image density is too light.	
	Damp or rough grain paper is used.	Use dry paper without rough grain.
	Toner bottle is almost empty.	Add toner. ☛ See "ADDING TONER" in the "General Reference".
The same copy area is dirty whenever making copies.	The platen cover, exposure glass, or document feeder belt is dirty.	Clean them. ☛ See "MAINTAINING YOUR MACHINE" in the "General Reference".
Parts of the image are not copied.	The original is not set correctly.	Set originals correctly. ☛ See pages 28 ~ 31.
	An improper paper size is selected.	Select the proper paper size.
Copies are blank.	The original is not set correctly.	Set originals correctly. ☛ See pages 28 ~ 31.
A moire pattern is produced on copies as shown in the illustration. 	Your original has dot pattern image or many lines.	Place the original on the exposure glass at a slight angle.

❒ If you cannot correct the problem by taking the above actions, please contact your service representative.

IF YOU CANNOT MAKE COPIES AS YOU WANT

Finishing

Problem	Cause	Action
Copies are not stapled.	After loading a new staple cartridge, staples might not be ejected the first few times you try to use the stapler.	
	A few sheets might not be stapled. To correct this, try turning over the paper stack in the tray unit. If there is no improvement, change to copy paper with less curl.	
	There are jammed staples in the stapler.	Remove jammed staples. ☛ See "REMOVING JAMMED STAPLES" in the "General Reference".
	The number of copies exceeds the capacity of the stapler.	Check the stapler capacity. ☛ See page 96.
Staples are wrongly positioned.	Originals are not set correctly.	Set originals correctly. ☛ See page 99.

Adjust Image

Problem	Cause	Action
In Double Copies mode, parts of the original image are not copied.	Combination of original and copy paper is not correct.	Select the proper original and copy paper. ☛ See the table on page 83.
In Centre/Border mode, parts of the original image are not copied.	You set the wide erased margin.	Set the narrower margin using the user tools. ☛ See page 119.
	Your original has narrow margins on four sides.	

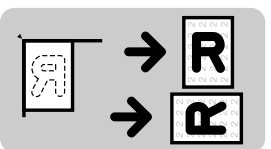
Adjust Image (continued)

Problem	Cause	Action
In Margin Adjustment mode, parts of the original image are not copied.	You set the wide margin.	Set the narrower margin using the user tools. ☛ See page 118.
In Image Repeat mode, the original image is not copied repeatedly.	You selected the same size copy paper as originals, and did not select the proper reproduction ratio.	Select copy paper larger than originals. ☛ See page 88.
		Select the proper reproduction ratio. ☛ See page 88.

Stamp

Problem	Cause	Action
Auto Stamping does not appear on copies.	The original is not set correctly.	Set originals correctly. ☛ See page 73.
Original image and Auto Stamping overlap on copies and original image cannot be read.	You selected the solid density.	Change the density of Auto Stamping using the user tools. ☛ See page 122.
	Your original has narrow margins on four sides.	Change the stamping position. ☛ See page 73.
User Stamping does not appear on copies.	User Stamping is not registered correctly.	Register User Stamping again using the user tools. ☛ See page 128.
	The low density image is registered.	Register User Stamping again with the high density original using the user tools. ☛ See page 128.
	The original is not set correctly.	Set originals correctly. ☛ See page 73.

Stamp (continued)

Problem	Cause	Action
Date Stamping does not appear in the desired direction. Page Numbering does not appear in the desired direction.	You have selected Date Stamping and Page Numbering together.	The stamping position decided afterwards takes priority. Select the same directions for both modes.
Directions of Background Numbering and original images on copies do not match.	Background Numbering cannot be rotated. If you set originals incorrectly, the Background Numbering does not appear copies in correct direction.	Set originals as follows: 
Date Stamping does not appear on copies.	The original is not set correctly.	Set originals correctly. ☛ See page 78.

Duplex

Problem	Cause	Action
Order of copies is not correct.	You set originals in the incorrect order.	When setting a stack of originals in the document feeder, the last page should be on the bottom. If you set a original on the exposure glass, start with the last page to be copied.
Orientation of copies (Top to Top, or Top to Bottom) is not correct.	You set originals in an incorrect direction or the orientation setting is incorrect.	Select the correct orientation, or set originals correctly. ☛ See page 61.

Combine

Problem	Cause	Action
You cannot make a booklet from 16 originals by folding copies.	Combine Original Booklet Format is not correct.	Change setting using the user tools. ☛ See page 120.
Parts of the image are not copied.	Your original is larger than A4 or 8 1/2" x 11".	The maximum original size that can be used is A4, 8 1/2" x 11". Use the correct original.
	You selected a different size copy paper from your originals.	Copy paper must be the same size as your original. Select the correct paper size.
		Select the correct reproduction ratio before using Combine mode.
	Your originals are not identical in size and direction.	Use originals that are identical in size and direction.
Order of copies is not correct.	You set originals in the incorrect order.	When setting a stack of originals in the document feeder, the last page should be on the bottom. If you set an original on the exposure glass, start with the last page to be copied.

CHANGING THE COPIER'S SETTINGS

USER TOOLS 114
User Tools Menu 114
How To Change The Copy Features 116
Copy Features 117
How To Register User Stamp 128

USER TOOLS

This section is for the key operators in charge of this copier. You can change or set the copier's default settings using the following user tools.

User Tools Menu

Basic Settings

❒ Regarding the "Basic Settings," ☛ see "CHANGING THE MACHINE'S SETTINGS" in the "General Reference".

Copy Features

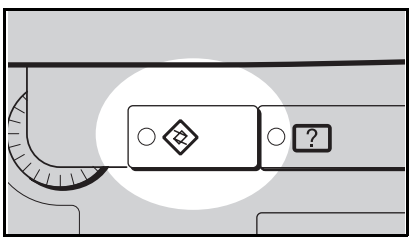
	Menu		☛ See
	Copy Modes	Auto Paper Select Priority	page 119
		Auto Image Density Priority	
		Original Mode Priority	
		Full Main Menu Display	
		Duplex Mode Priority	
		User Reproduction Ratio 1, 2	page 118
		Maximum copy quantity	
		Original beeper	
	Adjust Image	Margin Adjust Front	page 118
		Margin Adjust Back	
		Erase Border	page 119
		Erase Centre	
		1 → 2 Duplex Auto Margin Adjust	
		Double Copies Separation Line	page 119
		Combine Originals Booklet Format	page 120
		Image Repeat/Combine Separation Line	

Menu			☛ See
Stamp	Page Numbering Format		page 120
	P1,P2 1/5,2/5... Format Position		page 121
	-1-,-2- Format Position		
	Auto Stamping		page 122
	Stamp Layout	Size	
		Density	
		Position	page 123
	User Stamp		page 124
	User Stamp Layout	Size	
		Density	
		Position	
		Number of Stamps Per Page	
	Date Position/Format	Date Format	
		Orientation	
		Position	page 125
		Position Top Left	
		Position Bottom Right	
	Background Numbering Size		page 126
	Background Numbering Density		
Input/ Output	Duplex Remaining Copy Exit		page 126
	Combine Remaining Copy Exit		
	SADF Auto Reset Time		page 127
	Mixed Original Sizes		
	Auto Sort Mode		
	Memory Full Auto Scan Restart		page 127
	Rotate Sort Auto Paper Continue		

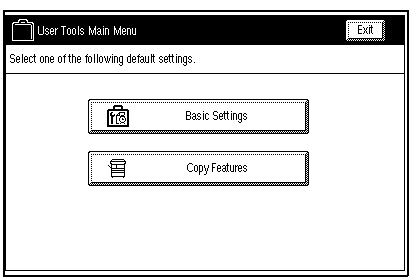
How To Change The Copy Features

1 Confirm that the copier is in the initial condition. If not, press the **Clear Modes/Low Power Mode** key.

2 Press the **User Tools** key.



3 Touch the **[Copy Features]** key.



4 Select the desired settings following the instruction on the display.

❒ **[▼Next]** : Use to go to the next page.
[▲Prev.] : Use to go back to the previous page.
[Exit] : Touch this key after entering the new data.
In the "User Tools Main Menu", touch to exit the User Tools condition.
[Cancel] : Touch to return to the previous menu without changing any data.
[Menu] : Use to go back to the previous menu.

5 To return to the initial condition, press the **User Tools** key.

Copy Features

Copy Modes

MENU	DESCRIPTION
Auto Paper Select Priority	As a default setting, Auto Paper select is selected. You can cancel this setting. ❒ Default: Yes
Auto Image Density Priority	As a default setting, Auto Image Density is selected. You can cancel this setting. ❒ Default: Yes
Original Mode Priority	As a default setting, Letter is selected. You can change it to Letter/Photo, Photo, or Generation Copy. ❒ Default: Letter
Full Main Menu Display	As a default setting, the tray keys are displayed only when Auto Paper Select is canceled, original type setting keys are displayed only when Letter mode is canceled, and the manual image density keys are shown only when the Auto Image Density is canceled. You can cancel this setting and have all keys displayed always. ❒ Default: Hide
Duplex Mode Priority	As a default setting, from one-sided originals to one-sided copies mode is selected. You can cancel this setting, and can select one of the following modes. ◆ **[1 Sided → 2 Sided]** (from even number of one-sided originals to a two-sided copy (orientation: Top to Top)) ◆ **[2 Sided → 2 Sided]** (from two-sided originals to two-sided copies) ❒ Default: **[1 Sided → 1 Sided]**
[▼ Next]	

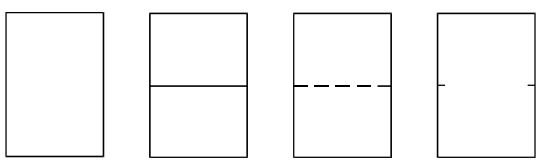
(Copy Modes in Copy Features)

[▼ Next]	
User Reproduction Ratio 1, 2	Up to 2 reproduction ratios (from 25 ~ 400%) which you frequently use can be registered.
Maximum copy quantity	The maximum copy quantity can be set between 1 and 999. ❒ Default: 999
Original beeper	The beeper sounds and a message is displayed, when an operator forgets to remove originals after copying. ❒ Default: On ❒ If the Operation panel beeper setting is set to Off (☛ see "USER TOOLS" in the "General Reference"), the beeper does not sound and only the message is displayed. ❒ If the Auto Response (Human) Sensor is set to No (☛ see "USER TOOLS" in the "General Reference"), this function does not work.
[▲ Prev.]	

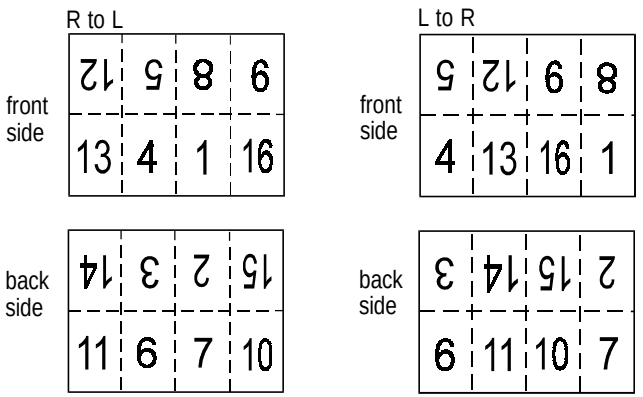
Adjust Image

MENU	DESCRIPTION
Margin Adjust Front **Margin Adjust Back**	The default setting of the margin widths on the front and back page in the Margin Adjustment mode can be changed as follows: Metric version: 0 ~ 30 mm in 1 mm steps* Inch version: 0" ~ 1.0" in 0.1" steps* *both left and right ❒ Default: Metric version: front 5 mm on left, back 5 mm on right Inch version: front 0.2" on left, back 0.2" on right ❒ Margin Adjust Back takes effect only when making two sided copies. ❒ The margin set in the Margin Adjust Back is added on the back side of copies automatically when making two-sided copies from one-sided originals if you select **[Yes]** in the "1 → 2 Duplex Auto Margin Adjust" menu.

(Adjust Image in Copy Features)

MENU	DESCRIPTION
Erase Border **Erase Centre**	The default setting of the width of the erased margins in the Erase Centre/Border mode can be changed as follows: Metric version: 3 ~ 50 mm in 1 mm steps Inch version: 0.1" ~ 2.0" in 0.1" steps ❒ Default: Metric version: 10 mm Inch version: 0.4"
1 → 2 Duplex Auto Margin Adjust	As a default setting, the image on the back side of copies is shifted automatically to create the binding margin when making two-sided copies from one-sided originals. This margin is decided in the Margin Adjust Back. You can cancel this setting. ❒ Default: Yes ❒ If you use the Margin Adjustment function, this setting does not come effect.
[▼ Next]	
Double Copies Separation Line	You can select a separation line in the Double Copies mode from broken line, solid line, crop marks, or no line. ❒ Default: Broken  None Solid Broken Crop Marks

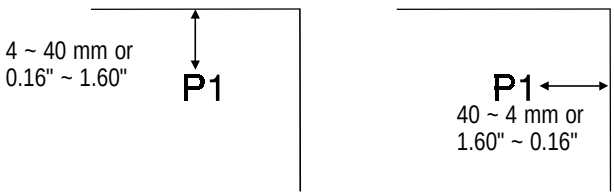
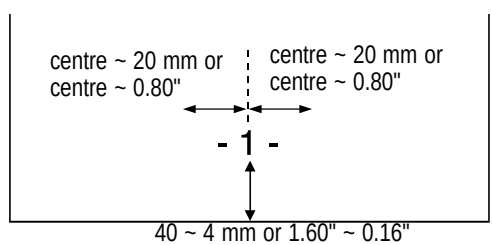
(Adjust Image in Copy Features)

MENU	DESCRIPTION
Combine Originals Booklet Format	When making a booklet from 16 originals in the Combine mode, you can select a booklet that reads from left to right or from right to left. ❒ Default: L to R 
Image Repeat/Combine Separation Line	As a default setting, no separation line is printed on copies in the Image Repeat and Combine modes. You can cancel this setting and print a solid separation line. ❒ Default: No
[▲ Prev.]	

Stamp

MENU	DESCRIPTION
Page Numbering Format	As a default setting, **[P1, P2...]** is selected when entering in the Page Numbering mode. You can cancel this setting and select other formats (**[1/5,2/5...]** or **[-1-,-2-...]**). ❒ Default: P1, P2 ···

(Stamp in Copy Features)

MENU	DESCRIPTION
P1, P2 1/5, 2/5... Format Position	The printing position of Page Numbering (P1, P2 and 1/5, 2/5) can be shifted up/down from the top edge and left/right from the right edge as follows: Metric version: 4 ~ 40 mm in 4 mm steps Inch version: 0.16" ~ 1.60" in 0.16" steps ❒ P1, P2 and 1/5, 2/5 formats can be printed on the right top corner. ❒ Default: Metric version: 8 mm (from the top edge), 12 mm (from the right edge) Inch version: 0.32" (from the top edge), 0.48" (from the right edge) 
-1-, -2- Format Position	The printing position of Page Numbering (-1-, -2-) can be shifted up down from the bottom edge and left/right from the centre of paper as follows: Metric version: up/down: 4 ~ 40 mm in 4 mm steps left/right: 0 (centre) ~ 20 mm in 2 mm steps Inch version: up/down: 0.16" ~ 1.60" in 0.16" steps left/right: 0" (centre) ~ 0.80" in 0.08" steps ❒ Only -1-, -2- format can be printed on the centre of the bottom. ❒ Default: Metric version: 8 mm (from the bottom edge), 0 mm (centre) Inch version: 0.32" (from the bottom edge), 0" (centre) 

(Stamp in Copy Features)

MENU	DESCRIPTION
Auto Stamping	As a default setting, "URGENT" is selected when entering in the Auto Stamping mode. You can cancel this setting and select other messages (CONFIDENTIAL, COPY, PRIORITY, PRELIMINARY, For Your Information, or Internal Use Only). ❒ If your machine is the metric version, the Auto Stamping cannot be used as a default setting. If you want to use this function, contact your sales or service representative. ❒ Default: URGENT
Stamp Layout	
You can change the size, density, and position of each message of Auto Stamping (URGENT, COPY, PRIORITY, PRELIMINARY, CONFIDENTIAL, For Your Information, and For Internal Use Only) ❒ If your machine is the metric version, the Auto Stamping cannot be used as a default setting. If you want to use this function, contact your sales/service representative.	
Size	There are four sizes of Auto Stamping message: 1 X, 2 X, 4 X, 8 X. ❒ Default: 1 X (32 mm x 64 mm, 1.28" x 2.56")
Density	There are three density levels (Solid, Fine Screen, and Coarse Screen). ❒ Default: Solid ❒ If the copy image overlaps the Auto Stamping in Solid, the copy image cannot be seen. Fine Screen, the copy image can be seen. Coarse Screen, the copy image can be seen more.

(Stamp in Copy Features)

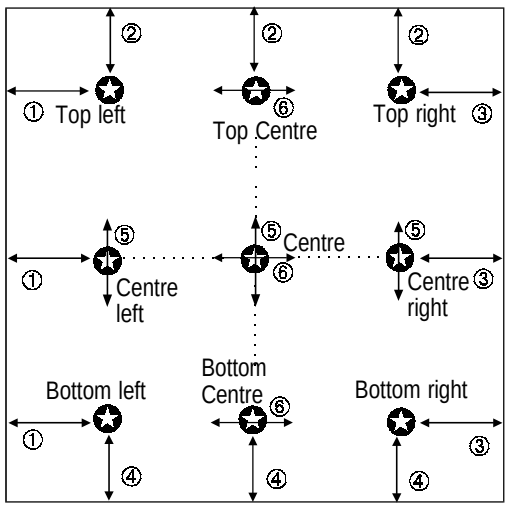
MENU	DESCRIPTION

Stamp Layout (continued)

Position

The default printing position of Auto Stamping can be selected from one of nine positions. Also, the default printing position can be adjusted as follows:

❒ Default: Top Right
Metric version: 24 mm from top and right edge
Inch version: 0.96" from top and right edge

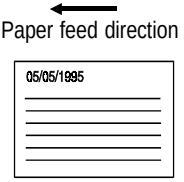
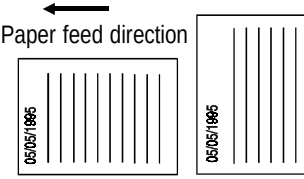


		Metric version	Inch version
①	from the left edge	4 ~ 104 mm	0.16" ~ 4.16"
②	from the top edge	4 ~ 144 mm	0.16" ~ 5.76"
③	from the right edge	4 ~ 104 mm	0.16" ~ 4.16"
④	from the bottom edge	4 ~ 144 mm	0.16" ~ 5.76"
⑤	from the horizontal centre line of paper	above 72 mm ~ below 72 mm	above 2.88" ~ below 2.88"
⑥	from the vertical centre line of paper	left 52 mm ~ right 52 mm	left 2.08" ~ right 2.08"

❒ Metric version: in 4 mm steps
Inch version: in 0.16" steps

[▼ Next]

(Stamp in Copy Features)

MENU	DESCRIPTION
	[▼ Next]
User Stamp	Using the **[Register]** key, you can register your own messages as user stamps. Up to four stamp can be registered. Also, you can delete registered user stamps using the **[Delete]** key. To perform this function, ☛ see page 128. ❒ A key with ◈ has a registered stamp in it.
	User Stamp Layout
	You can set the size, density, and position for each user stamp. The procedure is the same as the "Stamp Layout" on pages 122 and 123.
Size	☛ See page 122.
Density	☛ See page 122.
Position	☛ See page 123.
Number of Stamps Per Page	As a default setting, one user stamp is printed on a copy. You can cancel this setting, and print a user stamp repeatedly on a overall copy. ❒ Default: Single
	Date Position/Format
Date Format	You can select the date stamping format from one of three (mm/dd/yyyy, dd.mm.yyyy, or dd/mm/yyyy). ❒ Default: Metric version: dd.mm.yyyy Inch version: mm/dd/yyyy
Orientation	The orientation can be selected horizontal or vertical. ❒ Default: Horizontal <Horizontal> Paper feed direction  <Vertical> Paper feed direction 

(Stamp in Copy Features)

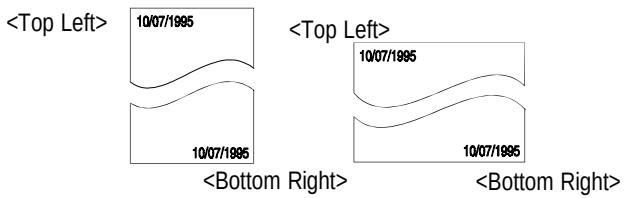
MENU	DESCRIPTION

Date Position/Format (continued)

Position

The date can be printed at Top Left or Bottom Right.

❒ Default: Top Left



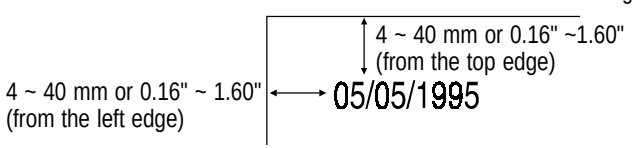
Position Top Left
Position Top Right

The stamping position can be shifted as follows.

Metric version: 4 ~ 40 mm in 4 mm steps
Inch version: 0.16" ~ 1.60" in 0.16" steps

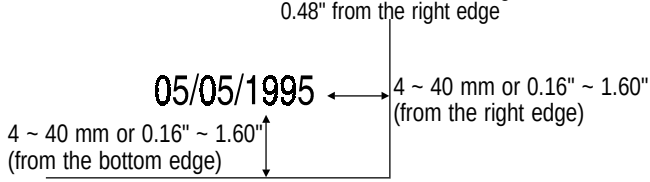
❒ Top Left Default

Metric version: 8 mm from the top edge
32 mm from the left edge
Inch version: 0.32" from the top edge
1.28" from the left edge



❒ Bottom Right Default

Metric version: 8 mm from the bottom edge
12 mm from the right edge
Inch version: 0.32" from the bottom edge
0.48" from the right edge



(Stamp in Copy Features)

MENU	DESCRIPTION
Background Numbering Size	There are three sizes of the Background Numbering. The size of one letter can be changed as follows: Large (approximately 64 x 32 mm or 2.56" x 1.28") Medium (approximately 32 x 16 mm or 1.28" x 0.64") Small (approximately 8 x 4 mm or 0.32" x 0.16") ❒ Default: Medium
Background Numbering Density	There are four density levels: Very Light, Light, Medium, or Dark. ❒ Default: Light
[▼ Next]	

Input/Output

MENU	DESCRIPTION
Duplex Remaining Copy Exit	As a default setting, when making two-sided copies from one-sided, or using Multi mode with the optional document feeder, the last copy paper can exit automatically with the back side blank under the following conditions. You can cancel this setting. ♦ When you select **[Even]**, although the number of originals are odd. ♦ When you select **[Odd]**, although the number of originals are even. ♦ When your originals are finished in the Multi mode. ❒ Default: Yes ❒ This function does not come effect, when you set one original at a time in the document feeder or set an original on the exposure glass.
Combine Remaining Copy Exit	As a default setting, even if the number of originals in the optional document feeder is less than the number required in the selected Combine mode, copies can be made. You can cancel this setting. ❒ Default: Yes ❒ This function does not come effect, when you set one original at a time in the document feeder or set an original on the exposure glass.

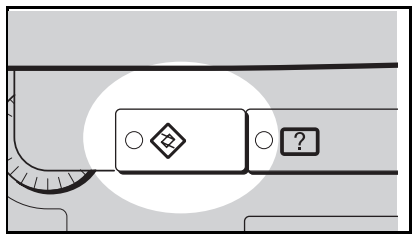
(Input/Output in Copy Features)

MENU	DESCRIPTION
SADF Auto Reset Time	When you set one original at a time in the optional document feeder, the Auto Feed indicator lights for a selected time after an original is fed to show that the document feeder is ready for another original. You can adjust this time from 3 seconds to 60 seconds in 1 second steps. ❒ Default: 10 seconds
Mixed Original Sizes	As a default setting, you cannot use originals of different sizes and directions when you set originals in the optional document feeder. You can cancel this setting. ❒ Default: No ❒ If you set the copier in this mode, the copying speed becomes slower in some modes.
Auto Sort Mode	As a default setting, Sort mode is not selected. You can cancel this setting and can select Sort mode as a default setting. ❒ Default: No
[▼ Next]	
Memory Full Auto Scan Restart	When memory runs out during copying, the machine can be programmed to behave in two ways with the user tools. **[Yes]**: After all images in memory are copied, the machine will re-start scanning automatically. You should re-order your copies after all copy jobs are finished. **[No]**: The machine will wait for you to press the **Start** key. At this point you should remove your copies from the copy tray. Press the **Start** key and then follow the instructions on the display to continue copying. ❒ Default: No
Rotate Sort Auto Paper Continue	As a default, two paper trays identical in size but different in direction must be available in the Rotate Sort or Rotate Stack mode. If there are not two paper trays identical in size but different in direction, the copier stops copying. Also, the copier stops if one of the selected paper trays in use runs out of paper. You can change this setting, so that the copier continues copying using paper trays identical in size and direction. ❒ Default: No
[▲ Prev.]	

How To Register User Stamp

1. Confirm that the copier is in the ready condition.

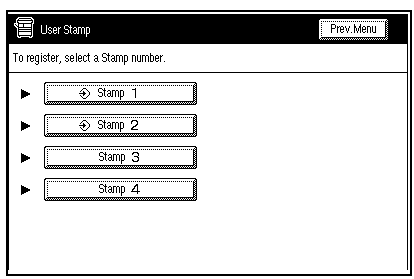
2. Press the **User Tools** key.



3. Touch the keys in the following order.
   [Copy Features] key
   [Stamp] key
   [Next] key
   [Register] key of the User Stamp menu

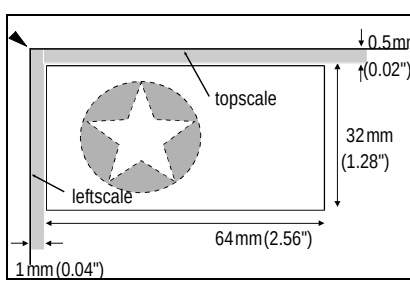
4. Select the user stamp number by touching a key.

- A key with ⇨ has a registered stamp in it. If you want to overwrite it, follow the instructions on the display after touching the key with ⇨.



5. Place your message on the exposure glass *face down* as shown in the illustration. Then, touch the **[Scan]** key.

- The area that can be registered is 64 mm x 32 mm (2.56" x 1.28") as shown in the illustration.
- Margins from the top and left scale cannot be registered as shown in the illustration.



6. Press the **User Tools** key to return to the ready condition.

SPECIFICATIONS

COPIER 130

COPIER

Configuration:	Desktop
Process:	Dry electrostatic transfer system
Memory capacity:	approximately 1GB hard disk
Scanning method:	Flatbed solid state scanner
Resolution:	400 x 400 dpi
Gray scale:	256 levels
Originals:	Sheet, book
Original thickness:	less than 30 mm, 1.18"
Original size:	Maximum: A3, 11" x 17"
Copy paper size:	☛ See pages "CHANGING THE PAPER SIZE" of the "General Reference".
Copy paper weight:	1st paper tray: 60 ~ 105 g/m^2 (16 ~ 28 lb) bypass tray: 60 ~ 157 g/m^2 (16 ~ 42 lb) large capacity tray: 60 ~ 128 g/m^2 (16 ~ 34 lb) when making two-sided copies: 64 ~ 105 g/m^2 (17 ~ 28 lb)
Copy paper capacity:	1st paper tray: 500 sheets or less than 53 mm, 2.08" bypass tray: 40 sheets or less than 4 mm, 0.15" large capacity tray: 1000 sheets or less than 120 mm, 4.72"
Optional copy tray capacity:	A3, 11" x 17": 200 sheets B5 or smaller: 200 sheets B4 or smaller: 500 sheets
Copying speed:	40 copies/minute (A4 ▯, 8 1/2" x 11" ▯, in Full Size mode)
First copy time:	less than 5.2 seconds (A4 ▯, 8 1/2" x 11" ▯, feeding from the large capacity tray)
Warm-up time:	less than 140 seconds (20°C, 68°F)

Toner replacement: Bottle exchange (700 g)

Power source: 120V , 60Hz, more than 12A

Preset reproduction ratios: 5 enlargement and 7 reduction

	Metric version	Inch version
Enlargement	400%	400%
	200%	200%
	141%	155%
	122%	129%
	115%	121%
Full Size	100%	100%
Reduction	93%	93%
	87%	85%
	82%	77%
	71%	74%
	65%	65%
	50%	50%
	25%	25%

Power consumption:

	Copier only	Full system*
Warm-up	less than 0.88 kW	less than 0.90 kW
Stand-by	less than 0.20 kW	less than 0.22 kW
Copying	less than 1.20 kW	less than 1.20 kW
Maximum	less than 1.50 kW	less than 1.50 kW

* Full system: copier with document feeder, finisher, and paper tray unit

Noise emission:

Sound pressure level (The measurements are made according to ISO 7779 at the operator position)

	Copier only	Full system
Stand-by	25 dB (A)	25 dB (A)
Copying	54 dB (A)	59 dB (A)

* Full system: copier with document feeder, finisher, and paper tray unit

Sound power level (The measurements are made according to ISO 7779.)

	Copier only	Full system
Stand-by	40 dB (A)	40 dB (A)
Copying	66 dB (A)	69 dB (A)

* Full system: copier with document feeder, finisher, and paper tray unit

Dimensions:

	Width	Depth	Height
Copier with platen cover, copy tray, and paper tray unit	1,150 mm 45.3"	655 mm 25.8"	1,024 mm 40.4"
Copier with document feeder, finisher, and paper tray unit	1,551 mm 61.1"	655 mm 25.8"	1,110 mm 43.8"
Copier with document feeder, 3-bin sorter, and paper tray unit	1,300 mm 51.2"	655 mm 25.8"	1,110 mm 43.8"

Weight:

Copier with platen cover, copy tray, and 1500-sheet paper tray unit	137.5 kg 303.2 lb
Copier with document feeder, finisher, and 1500-sheet paper tray unit	178.5 kg 393.6 lb
Copier with document feeder, 3-bin sorter, and 1500-sheet paper tray unit	161.0 kg 355.0 lb

Optional equipment:

Document feeder
Finisher
Copy tray
Platen cover
1500-sheet tray unit
1000-sheet tray unit
3-bin sorter

❒ Specifications are subject to change without notice.

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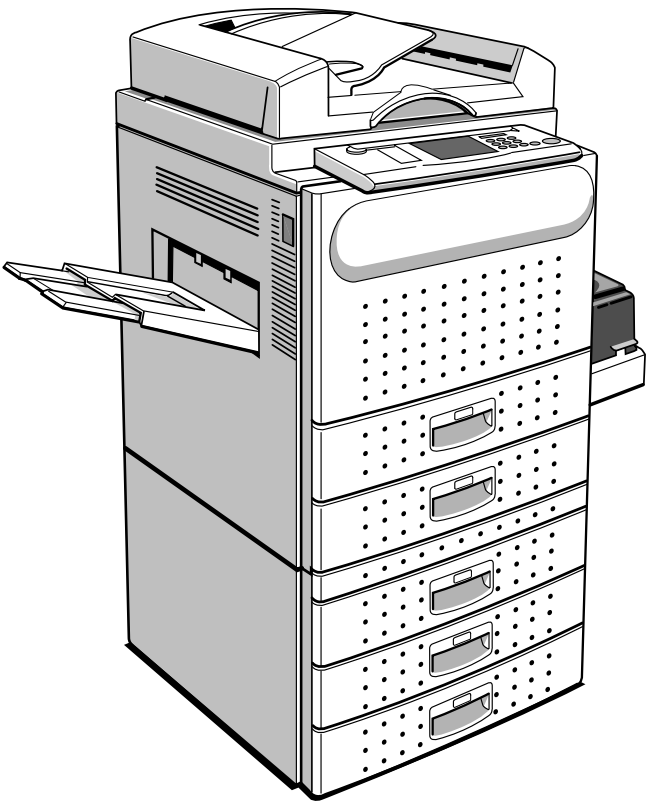
Aficio 401

RICOH

Printer Reference



Operating Instructions

SAFETY INFORMATION i

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SAFETY INFORMATION

This section contains important safety information regarding the machine. Please review all of the information contained in this section before using the machine. Doing so will help ensure user safety and prevent equipment problems or failure. When you use the machine, the following safety precautions should always be followed.

Warning:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frquency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

Cet appareil numerique respecte les limites de bruits radioelectriques applicables aux appareils numeriques de Class A prescrites dans la norme sur le materiel brouilleur:

"Appareils Numeriques", NMB-003 edictee par le ministre des Communications.

CE

Declaration of Conformity
"The Product complies with the requirements of **the EMC Directive 89/336/EEC** and the **Low Voltage Directive 73/23/EEC."**

Konformitäserklärung
"Das Produkt entspricht den Anforderungen der **EMV-Richtlinie 89/336/EWG** und der **Niederspannungsrichtlinie 73/23/EWG.**"

Déclaration de conformité
"Le produit remplit toutes les conditions requises par la **directive EMC 89/336/CEE** ainsi que la **directive faible voltage 73/23/CEE."**

Dichiarazione di conformità
"Il prodotto è conforme ai requisiti della **direttiva CEE 89/336 EMC** e della **direttiva CEE sulla bassa tensione 73/23."**

Declaración de conformidad
"Este producto cumple con los requisitos de **la Directiva sobre Compatibilidad Electromagnetica 89/336/EEC** y con la **Directiva sobre Baja Tension 73/23/EEC."**

Försäkran om överensstämmelse
"Denna produkt uppfyller kraven enligt **EMC-direktiv 89/336/EEC** och **lågspänningsdirektiv 73/23/EEC."**

Verklaring van conformiteit
"Dit product voldoet aan de vereisten van de **EMC-richtlijn 89/336/EEC** en de **laagspanningsrichtlijn 73/23/EEC."**

Erklaring om overensstemmelse
"Produktet imøtekommer kravene í **EMC-direktivet 89/336/EEC** og i **lavspenningsdirektivet 73/23/EEC."**

Erklæring om overensstemmelse
"Dette produkt overholder kravene í **EMC direktiver 89/336/EEC** og **lavstrømsdirektivet 73/23/EEC."**

Declaração de conformidade
"O produto está em conformidade com os requistos **de Directiva EMC 89/336/EEC** e a **Directiva sobre baixa-voltagem 73/23/EEC."**

Samræmisyfirlýsing
"Tæki petta er framleitt í samræmi vid kröfur í **Tilskipun nr. 89/336/EBE** um rafsegulsvidssamhæfi og **Tilskipun nr. 72/23/EBE** um rafföng sem nutud eru innan ákvedinna spennumarka.."

Yhdenmukaisuusilmoitus
"Tuote on **EMC direktiivin 89/336/EEC** ja **heikkovirtadirektiivin 72/23/EEC mukainen."**

EMC: CISPR-22:1985/EN 55022:1988 class B*

***Note:**
This product contains Network Interface Card (NIC) options. When using the NIC option, the product meets the requirements of EN55022 class A.

Operator Safety:
This copier is considered a CDRH class I laser device, safe for office/EDP use. The Copier contains a 15-milliwat, 760-800 nanometer wavelength, GaAIAs laser diode. Direct (or indirect reflected) eye contact with the laser beam may cause serious eye damage. Safety precautions and interlock mechanisms have been designed to prevent any possible laser beam exposure to the operator.

Laser Safety:
The Center for Devices and Radiological Health (CDRH) prohibits the repair of laser-based optical unit in the field. The optical housing unit can only be repaired in a factory or at a location with the requisite equipment. The laser subsystem is replaceable in the field by a qualified Customer Engineer. The laser chassis is not repairable in the filed. Customer engineers are therefore directed to return all chassis and laser subsystems to the facotry or service depot when replacement of the optical subsystem is required.

Warning:
Use of controls or adjustment or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

Notice:
Product names used herein are for idetification purposes only and may be trademarks of their respective companies. The manufucture disclaims any and all rights in those marks.

When using your machine, the following safety precautions should always be followed.

Safety During Operation

In this manual, the following important symbols are used:

> ⚠***WARNING:*** ***Ignoring this warning could cause serious injury or even death.***
>
> ⚠***CAUTION:*** *Ignoring this caution could cause injury or damage to property.*

Examples Of Indications

⚠ Symbols ⚠ means a situation that requires you take care.

⚠ Symbols ⚠ means "Hot surface"

⃠ Do NOT carry out the operation represented by the symbol ⃠
This example means "Do not take apart."

Symbols means you MUST perform this operation. This example means "You must remove the wall plug."

⚠ *WARNINGS:*

- Only connect the machine to the power source described on the inside front cover of this manual.
- Avoid multi-wiring
- Do not damage, break or make any modifications to the power cord. Do not place heavy objects on it, pull it hard or bend it more than necessary. These actions could cause an electric shock or fire.
- Do not plug or unplug the power cord with your hands wet. Otherwise, an electric shock might occur.

- Make sure the wall outlet is near the machine and freely accessible so that in event of an emergency it can be unplugged easily.

- Do not remove any covers or screws other than those specified in this manual. Some parts of the machine are at a high voltage and could give you an electric shock. Also, if the machine has laser systems, direct (or indirect) reflected eye contact with the laser beam may cause serious eye damage. When the machine needs to be checked, adjusted, or repaired, contact your service representative.
- Do not take apart or attempt any modifications to this machine. There is a risk of fire, electric shock, explosion or loss of sight. If the machine has laser systems, there is a risk of serious eye damage.

- If the machine looks damaged or breaks down, smoke is coming out, there is a strange smell or anything looks unusual, immediately turn off the main and AC switches then unplug the power cord from the wall. Do not continue using the machine in this condition. Contact your service representative.
- If metal, liquid or foreign matter falls into the machine, turn off the main and AC switches, and unplug the main power cord. Contact your service representive. Do not keep using the machine with a fault or defect.

- Do not put any metal objects or containers holding water (e.g.vases, flowerpots, glasses) on the machine. If the contents fall inside the machine, a fire or electric shock could occur.

- Do not incinerate used toner or toner containers. Toner dust might ignite when exposed to an open flame. Dispose of the used toner containers according to local regulations for plastics.

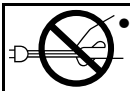
- Do not incinerate the photoconductor unit. Toner dust might ignite when exposed to open flame. Dispose of the used photoconductor unit according to local regulations for plastics.

⚠ *CAUTIONS:*

- Keep the machine away from humidity and dust. A fire or an electric shock might occur.
- Do not place the machine on an unstable or tilted surface. If it topples over, it could cause injury.

- After you move the machine, fix it with the caster fixture. Othewise, the machine might move or come down to cause a personal injury.

- When you move the machine, unplug the power cord from the wall outlet to avoid fire or electric shock.
- When the machine will not be used for a long time, unplug the power cord.



- When you pull out the plug from the socket, grip the plug to avoid damaging the cord and causing fire or electric shock.

- If you use the machine in a confined space, make sure there is a continuous air turnover.

- Do not reuse stapled paper. Do not use aluminum foil, carbon-containing paper or other conductive paper. Otherwise, a fire might occur.

- When removing misfed paper, do not touch the fusing section because it could be very hot.

- This machine has been tested for safety using this supplier's parts and consumables. We recommend you only use these specified supplies.

- Do not eat or swallow toner.
- Keep toner or toner containers out of reach of children.

INTRODUCTION

This manual contains detailed instructions on the operation and maintenance for the printing capabilities of this machine. To obtain maximum versatility from this machine, all users should carefully read and follow the instructions contained in this manual.

Make sure to read the "Safety Information" section of this manual before using the machine as a printer. It contains important information related to user safety and to preventing equipment problems.

Overview

This multifunctional machine, in addition to providing you with outstanding copying capabilities, allows you to print data received from a host computer. The printer capability supports the Printer Control Language Version 5e (PCL 5e) printer language and, optionally, PostScript printing.

The data can be received on a standard parallel or serial port from the host computer or using the optional network configuration. The IDE hard disk drive provided with the machine performs numerous functions, including support for font storage, print input data spooling, and the temporary storage of print data as required for page sorting, and duplex printing. The machine prints at 300, 400 or 600 dots per inch (dpi). The engine supports a maximum speed of 40 pages per minute (ppm) when printing at 300 or 400 dpi, long edge feed of letter size paper.

The machine contains 46 PCL 5e fonts, (35 Intellifonts, 10 True Type fonts, and 1 bitmapped font) and 39 optional PostScript fonts. ☛ Refer to Appendix A for further information on the PCL 5e fonts and to Appendix B for further information on the PostScript fonts. ☛ Refer to Appendix B for further information on the memory provided with, and available for, the machine.

An optional network slot is provided for network connectivity. This slot supports an Ethernet or Token Ring card.

The machine provides numerous printer features, including the following:

- 11 by 17 inch maximum image size.
- High quality laser print output at 300, or 600 dpi. (400 dpi is available with PostScript.)
- Support for PCL 5e and PostScript Level II printer languages.
- Ports for parallel, serial, and optional network communications with Windows 3.1, Windows 95 and Macintosh systems.
- 46 PCL 5e fonts that include 35 Intellifonts, 10 True Type fonts and 1 bitmapped font, as well as 39 optional PostScript fonts.
- Speeds of up to 40 pages per minute (ppm) at 300 or 400 dpi, long edge feed of letter size paper.
- Standard input trays that include a 500 sheet upper input tray, a 1,000 sheet large capacity input tray and a 40 sheet manual feed tray.
- Optional output trays that include a 500 sheet output bin, a 3-bin sorter, and a finishing bin which provides finishing capabilities such as stapling.
- Optional input trays that include a 1,000 sheet tray, and a 1,500 sheet tray.
- Numerous page output features, including duplexing, sorting, and job separation.

The machine operates in one of the following modes:

- Share mode
- Printer Priority mode
- Printer Only mode
- Scanner Only mode.

Share Mode

The factory default is Share mode, and the Copier screen displays when the machine is powered up. The Share mode screen shifts when the following occurs:

- A user sends a print job through any of the external Input/Output (I/O) ports (parallel, serial, or the optional network interface).
- A user presses the **[Printer/Scanner]** button on the Control Panel.

You can use the machine as a copier when the Copier screen displays. When the Share mode screen displays, you can change to the Copier screen by pressing the **[Copy]** button on the Control Panel. When jobs are printing, and you press the **[Copy]** button, the Copier screen displays after the current print job is completed. Any remaining print jobs are interrupted and will continue printing after you complete your copy job.

When the machine is in Share mode, all print jobs are received as they are sent, regardless of whether the machine is printing or copying.

You can access the various modes (for example, Printer Priority mode, Printer Only mode, or Scanner Only mode) from the Share mode screen. To perform this task, you must set the status of the machine to offline, access the Setup menu, access the Configuration menu, and specify the mode setting you want using the "Mode" selection.

When you are in Share mode, each time you request a mode change, the change is made on the job boundary (this means that the current job completes before the machine changes to the requested mode). When you are in Printer Priority mode, the machine operates in the same manner as in Share mode, except that the machine does not interrupt the currently queued print jobs to access the Copier screen.

Printer Priority Mode

When set to Printer Priority mode, the machine functions the same as when set to Share mode, except that you cannot interrupt a copier job (the **[Interrupt]** button is disabled).

Printer Only Mode

When the machine is set to Printer Only mode, only printing is allowed. When the **[Interrupt]** button is pressed, the copier interrupt request is ignored. When the **[Copy]** or **[Scanner]** button is pressed, the machine beeps to notify the user that these functions are not available.

Scanner Only Mode

When the machine is set to Scanner Only mode, only scanning is allowed. When the **[Interrupt]** button is pressed, the copier interrupt request is ignored. When a **[Copy]** button is pressed, the machine beeps to notify the user that the copy function is not available. The machine is in an offline status for print jobs.

Options

The following are available to you as options that you can add to the basic components provided with the machine:

- **PostScript option** - The PostScript option allows the machine to support Adobe PostScript Level II. When you add the PostScript option to the machine, downloading of PostScript Type 1 fonts is supported. The PostScript option includes a rasterizer for TrueType fonts that allows you to download TrueType fonts as soft fonts. No resident TrueType fonts are supported. You use the PostScript ROM expansion slot for this PostScript ROM Single Inline Memory Module (SIMM) option.
- **Network Interface Card (NIC) option** - The machine is equipped with an expansion Input/Output (I/O) slot that you can use to connect the machine to your network. Either an Ethernet or a Token Ring card can be installed in this expansion I/O slot.
- **Memory option** - The machine is configured with 8 megabytes (M) of Dynamic Random Access Memory (DRAM). A service technician can add DRAM SIMM modules in the two available DRAM SIMM sockets. The DRAM SIMM sockets accept modules of 8 M, 16 M, or 32 M. You can add up to 64 M of additional DRAM for a maximum total of 72 M of DRAM.

- **Input tray options** - The optional input trays include a 1,000 sheet tray and a 1,500 sheet tray.
- **Output options** - The output options include a finisher bin, which provides finishing capabilities such as stapling, a 500-sheet tray, and a 3-bin sorter.
- **Scanner option** - The scanner interface option consists of a SCSI connector that permits scanner data output (the interface is a SCSI II and is ISIS and Twain compliant). When you have the scanner option board installed, and have initiated the SCSI transfer program on the host computer, SCSI scanning is available and can be initiated from the Control Panel.

Using this Manual

This manual explains how to configure and use the machine as a printer. This section contains a list of the contents of this manual, the conventions used throughout the manual, and various publications that may be of further use to you when using the machine as a printer.

Contents

This guide contains the following chapters and appendices:

- **Chapter 1:Setting up the Printer** - provides information on preparing to use the machine as a printer.
- **Chapter 2:Control Panel** - describes how you use the main buttons, numeric keypad, and Control Panel menus to configure and use the printer functions.
- **Chapter 3:Using the Printer Drivers** - contains information on installing, configuring and using the printer drivers.
- **Chapter 4:Troubleshooting** - contains a list of the error messages that may display and the action you take to eliminate the error. Also contains information on how to handle print quality problems and paper jams.

- **Chapter 5:Specifications** - contains hardware specifications for the printer, interface specifications, and information on the media (paper) you can use to perform various print jobs.
- **AppendixA: Fonts** - contains information on the PCL 5e fonts you can use when printing.
- **Appendix B: Memory and Options** - contains information on the memory, provided with, and available for the machine and describes the options available for the machine, including the PostScript and Network Interface Card (NIC) options.
- **Appendix C: Tray Specifications** - contains tables that illustrates the North American and European input tray and duplex tray specifications for the machine.

A glossary and an index are provided at the end of this manual.

Conventions

The following conventions are used throughout this manual:

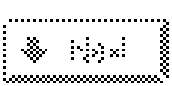
Square brackets - the names of the hard and soft keys and the buttons available on the machine and on the Control Panel are shown in square brackets. For example, the **[Interrupt]** button.

Italics - names of documents are shown in italics. For example, *Printer Reference Guide*.

☛indicates that the following text refers to additional sections and chapters that contain further information about the topic.

Keys that can be selected on the current menu display on the Control Panel in this manner.

Keys that have been selected on the current menu display on the Control Panel in this manner.



Keys that cannot be selected on the current menu display on the Control Panel in this manner.

Note: *In general, "Notes" provide additional information to help you complete a task or further understand the text.*

⚠ ***CAUTION:*** *In general, "Cautions" provide information important in preventing damage to your equipment, or to avoiding a situation that may cause injury to you.*

⚠ ***WARNING:*** *In general, "Warnings" provide information important in alerting you to a situation that may cause injury to you and damage to your equipment and property if instructions are not followed correctly.*

This symbol displays to notify you that the component may be very hot and should not be touched.

In accordance with the ISO Standard 7001, this main switch symbol means "Stand By" or "Please Wait."

In accordance with the ISO Standard 7001, this main switch symbol means "Power On."

In accordance with the ISO Standard 7001, this main switch symbol means "Power Off."

This display symbol means "Ready."

Related Documents

General Reference Guide

Copier Reference Guide

Scanner Reference Guide

Network Interface documentation

PostScript Language Reference Manual, Adobe Systems Inc.

PostScript Language Reference Manual Supplement for Version 2015, Adobe Systems, Inc.

PCL 5 Comparison Guide, Hewlett Packard Company

PCL 5 Printer Language Technical Reference Manual, Manual Part No., 33459-90903, Hewlett Packard Company

Printer Job Language Technical Reference Manual, Hewlett Packard Company

Plug and Play Parallel Port Devices, Microsoft Corporation

General Information

The following information is provided for your general knowledge:

- For good copy quality, it is recommended that you use only the specified printer engine toner and developer.
- Some of the illustrations contained in this manual may differ slightly from your machine.
- Some of the options described in this manual may not be available in your country. Contact your local dealer for details on option availability.
- ☛Refer to the *Copier Reference Guide* for basic information on the machine and for information on using the machine as a copier.

1. SETTING UP THE PRINTER

REQUIREMENTS

Before you can use the machine as a printer you must make sure that you have met all of the environmental and electrical requirements. You must also connect the machine to your host computer using the parallel, serial, or optional Ethernet or Token Ring connection. Make sure that you have all of the cables, connectors, and electrical outlets necessary to attach the machine to your host computer or network. ☛Refer to the "Connecting the Printer to the Host" section in this chapter for further information.

Environmental Requirements

The location of the machine is important as environmental conditions can greatly affect the printer performance. Keep the following in mind when setting up the machine:

- ❒ Set up the machine in an easily accessible area with temperatures between 50 and 86 degrees Fahrenheit (10 to 30 degrees Centigrade) with a relative humidity of 15 to 90 percent, not higher than 6600 feet (2000 meters) above sea level.
- ❒ Place the printer in a large well ventilated room with an air turnover of more than 30 cubic meters, per hour, per person.
- ❒ Make sure that the machine is level in an area with little or no vibration and with a minimum clearance of 720 mm above, 20 mm on each side, 130 mm to the rear, and a comfortable working area in the front.
- ❒ Place the machine in an area with the least amount of dust, and keep the machine out of direct sunlight.
- ❒ Attempt to keep users from placing any items on top of the printer.

⚠ ***CAUTION:*** *Do not place the machine directly below an air conditioning or heating vent, sudden temperature changes can cause condensation within the machine.*

Electrical Requirements

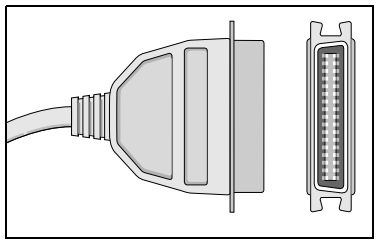
Keep the following in mind when connecting your printer to an electrical outlet:

- The machine requires a dedicated power source of 120 V, 60 Hz, more than 12A (15 or 20 AMP circuit). In Europe, power requirements are 220~240V, 50Hz to 60Hz, more than 6.5A (15 or 20 AMP circuit).
- Make sure that your wall outlet is close to the machine and is easily accessible. In addition, make sure the outlet supports a three-prong plug (grounded). If a three-prong outlet is not available, purchase an adapter or replace the outlet with one that supports a three-prong plug. When you plug the machine into the outlet, make sure the plug is inserted firmly.
- Make sure that the voltage does not fluctuate more than 10 percent at any time.
- Do not place anything on top of the power cord.
- Always turn the machine off when you are finished for the day, but leave the power cord plugged in.

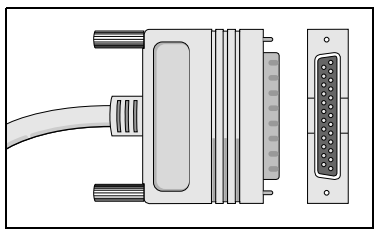
Parallel and Serial Cable Requirements

You can connect the machine to your host computer using either a parallel or a serial port. It is your responsibility to provide the cables necessary for the interface you want to use. However, four ferrite cores, designed to screen electromagnetic interference, are provided with the machine. You must attach a ferrite core around each end of the Centronics or RS-232-C cable.

The parallel connection provided with the machine is a standard bi-directional Centronics-compatible interface and requires a standard 36-pin parallel cable and a parallel port available on the host computer. Do not use a parallel cable that is longer than ten feet (three meters).



The serial connection is a standard RS-232-C interface and requires a standard 25-pin serial cable and a serial port available on the host computer. You can use a serial cable length of 10 feet to 50 feet (3 to 15 meters).



When you have decided on the type of connection you want to use, purchase the correct cables, in the length necessary, to attach the machine to your host computer.

⚠ ***CAUTION:*** *When you have the machine connected to a host computer, you should always turn on the host computer before you turn on the machine.*

☛Refer to the "Specifications" chapter in this manual for the cable specifications.

Network Connections

With its high-speed output, multiple ports, support for various printer languages, and other available options, the machine is highly effective as a network printer.

When you have decided to add the Network Interface option to the machine and you have the required Ethernet or Token Ring card installed in the expansion Input/Output (I/O) slot provided for this option, you can connect the machine to your Ethernet or Token Ring network.

⚠ ***CAUTION:*** *The Ethernet or Token Ring card is installed in the expansion I/O slot by your service representative.*

To use the machine with a PC network, you can connect to the network in one of the following ways:

- ❒ Connect the machine to a computer that is connected to a local area network (LAN). If the printing software for the network resides on the computer to which you connect the machine, this computer can act as a print server, spooling and managing print jobs for the users on the network.
- ❒ Directly connect the machine to an Ethernet or Token Ring LAN by providing the appropriate physical connection. When you connect to the network in this manner, you do not have to dedicate a specific computer as the print server.

Regardless of how you connect the machine to the network, refer to the *Network interface documentation* provided with this option for further information.

Note: *Make sure to consult with your Network Administrator before deciding how you want to connect the machine to the network.*

☛Refer to Chapter 7, "Specifications," for the cable specifications.

CONNECTING THE PRINTER TO THE HOST

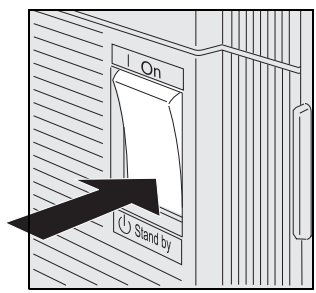
When you have decided whether you want a parallel or a serial connection, and you have obtained the cables necessary to perform the task, you can connect the machine to your host computer.

Connecting the Parallel Cable

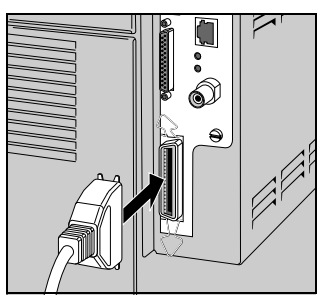
Follow these steps to connect the machine to your host computer using a parallel interface:

1. Make sure you have the cables necessary for the connection.

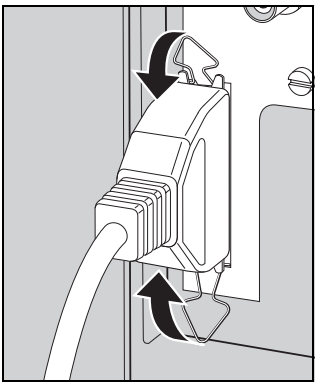
2. Make sure that both the machine and the host computer are turned off.



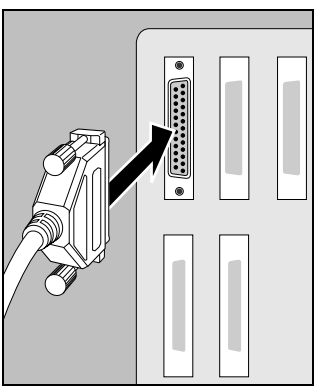
3. Plug the 36-pin end of the parallel cable into the parallel port on the side of the machine.



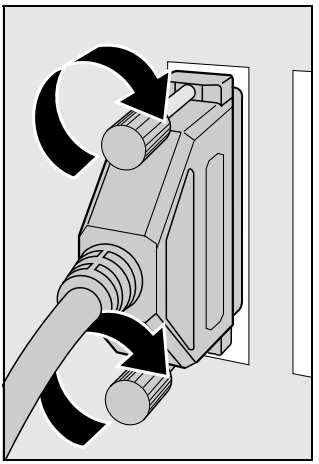
4 Press the wire clips on each side of the connector until the clips snap into place. This is to make sure that the cable remains in position.



5 Plug the 25-pin end of the parallel cable into the parallel port on the back of the host computer.

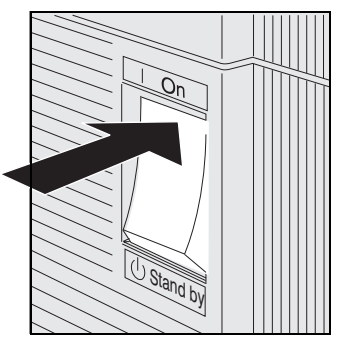


6 Tighten the screws on each side of the connector to make sure the cable remains in position.



7 Turn on the host computer.

8 Turn on the machine.



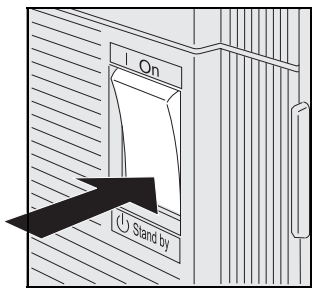
When you have completed this procedure, ☛refer to the "Testing" section in this chapter.

Connecting the Serial Cable

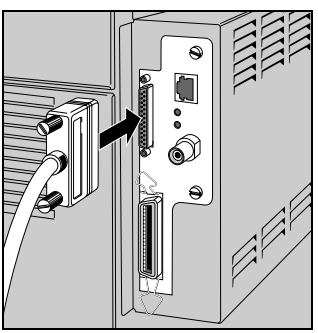
Follow these steps to connect the machine to your host computer using a serial interface:

1. Make sure you have the cables necessary for the connection.

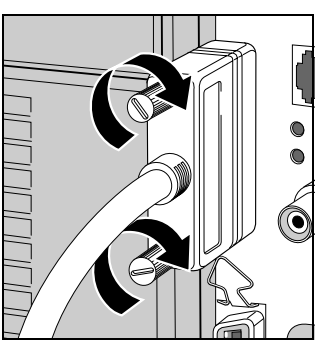
2. Make sure that both the machine and the host computer are turned off.



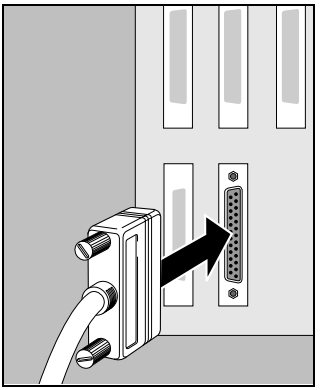
3. Plug the male end of the 25-pin serial cable into the serial port on the side of the machine.



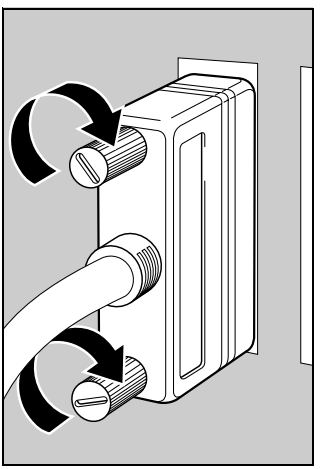
4. Tighten the screws on each side of the connector to make sure the cable remains in position.



5 Plug the other end of the 25-pin or 9-pin serial cable into the serial port on the back of the host computer.

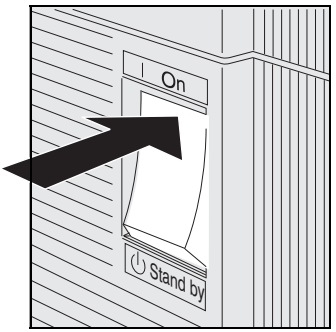


6 Tighten the screws on each side of the connector to make sure the cable remains in position.



7 Turn on the host computer.

8 Turn on the machine.



When you have completed this procedure, ☛refer to the "Testing" section in this chapter.

INSTALLING THE DRIVERS

When you have connected the machine to your host computer, you must install the appropriate printer drivers to enable your applications to communicate with the printer.

Your printer is provided with diskettes that contain PCL printer driver and screen font software for Windows 3.1, Windows 95 or Macintosh systems. In addition, when you have the PostScript option installed on the machine, the PostScript printer driver software is provided for your Windows 3.1, Windows 95 or Macintosh system.

This section contains the procedures you follow to install your printer driver software and to install your screen fonts, when necessary.

Installing the Windows Font Management and Printer Screen Fonts

The PCL printer driver and screen fonts are each provided on a 3.5 inch diskette. The procedure you use to install the PCL 5e printer driver and screen fonts varies depending on your host computer operating system and is provided for Windows 3.1 and Windows 95.

Note: *To use the printer with a Macintosh computer, you must install the PostScript driver. ☞Refer to "Installing the Macintosh PostScript Driver" section of this chapter for more information.*

Installing the PCL 5e Printer Driver on Windows 3.1

Follow these steps to install the PCL 5e printer driver on your Windows 3.1 system:

1. Insert the "PCL Printer Driver for Windows 3.1" diskette in the 3.5 inch disk drive on the host computer.
2. Close any applications that are currently running.
3. From the Program Manager, double-click on the **Main** icon and then double-click on the **Control Panel** icon.
4. From the Control Panel window, double-click on the **Printers** icon. The List of Printers window displays.
5. Click the **[Add>>]** button.
6. In the List of Printers window, scroll to the top of the list and select **Install Unlisted or Updated Printers**.
7. Click the **[Install]** button. The Install Driver window displays.
8. From the Install Driver window, select the drive in which the installation diskette is located and click **[OK]**. The Add Unlisted or Updated Printer window displays listing "your printer name."
9. Click **[OK]** to complete the installation.

Installing the Screen Fonts on Windows 3.1

Follow these steps to install the screen fonts on your Windows 3.1 system:

1. Insert the "PCL Screen Font" diskette in the 3.5 inch disk drive on the host computer.
2. Close any applications that are currently running.
3. From the Program Manager, select **Run** from the **File** menu. The Run window displays.
4. From the Run window type **"a:** (or the letter that represents the drive in which you placed the installation diskette) **install.exe**".
5. Click **[OK]** and follow the installation instructions that display on the screen.

Installing the PCL 5e Printer Driver on Windows 95

Follow these steps to install the PCL 5e printer driver on your Windows 95 system:

1. Insert the "PCL Printer Driver for Windows 95" diskette into the 3.5 inch disk drive on the host computer.
2. Close any applications that are currently running.
3. Click the **Start** button and select **Printers** from the **Settings** submenu. The Printer window displays.
4. From the Printers window, double-click on the **Add Printer** icon. The Add Printer Wizard window displays.
5. From the Add Printer Wizard window, click **[NEXT>]**. The list of printers displays.
6. Click **[Have Disk]**. The Install From Disk window displays.

7. In the Install From Disk window, type the letter for the drive that containing the installation diskette and click **[OK]**. "Your Printer Name" displays.

8. Click **[Next]** and follow the instructions that display on the screen to complete the installation.

Installing the Screen Fonts on Windows 95

Follow these steps to install the screen fonts on your Windows 95 system:

1. Insert the "PCL Screen Font" diskette into the 3.5 inch disk drive on your host computer.

2. Close any applications that are currently running.

3. Click the **Start** button and select **Run**. The Run window displays.

4. From the Run window type "**a:** (or the letter that represents the drive in which you placed the installation diskette) **install.exe**.".

5. Click **[OK]** and follow the installation instructions that display on the screen.

Installing the Windows PostScript Printer Driver

You must install the PostScript printer driver to utilize the functionality provided by the PostScript printing option. You only need this printer driver when you have the PostScript option installed on the machine. The procedure you use to install the PostScript printer driver varies depending on your host computer operating system and is provided for Windows 3.1 and Windows 95.

Note: *To use the printer with a Macintosh computer, you must install the PostScript driver. ☞Refer to "Installing the Macintosh PostScript Driver" section of this chapter for more information.*

Installing the PostScript Printer Driver on Windows 3.1

Follow these steps to install the PostScript printer driver on your Windows 3.1 system:

1. Insert the "PostScript 2 Printer Driver for Windows 3.1" diskette into the 3.5 inch disk drive on your host computer.
2. Close any applications that are currently running.
3. From the Program Manager, select **Run** from the **File** menu. The Run window displays.
4. From the Run window type "**a:**\ (or the letter that represents the drive in which you placed the installation diskette) **setup.exe**".
5. Click **[OK]** and follow the installation instructions that display on the screen.

Installing the PostScript Printer Driver on Windows 95

Follow these steps to install the PostScript printer driver on your Windows 95 system:

1. Insert the "PostScript 2 Printer Driver for Windows 95" diskette into the 3.5 inch disk drive on your host computer.
2. Close any applications that are currently running.
3. Click the **Start** button and select **Run**. The Run window displays.
4. From the Run window type "**a:**\ (or the letter that represents the drive in which you placed the installation diskette) **setup.exe**".
5. Click **[OK]** and follow the installation instructions that display on the screen.

Installing the Macintosh PostScript Printer Driver

The Macintosh PostScript printer driver allows your Macintosh computer to recognize the machine. You must have the PostScript option installed on the machine to use the PostScript printer driver.

Note: *To use the printer with a Macintosh computer, you must have the PostScript printing option and the PostScript printer driver installed on the machine.*

Installing the PostScript Printer Driver on Macintosh

Follow these steps to install the PostScript printer driver on your Macintosh system:

1. Insert the "PostScript 2 Printer Driver for Macintosh" diskette in the disk drive.
2. Double-click on the diskette icon.
3. Double-click on the "PS Printer Install" icon.
4. Follow the instructions that display on the screen.

TESTING

When you have attached the machine to the host computer you can test the connection and the printing functions using the Control Panel. The following test pages are available using the **[Test Menu]** selection from the Setup Menu selection on the Control Panel:

- **Print PS Fonts** - prints a PS Fonts test page.
- **Print PCL Fonts** - prints a PCL Fonts test page.
- **Print PS Demo** - prints a PS Demo test page.
- **Print PCL Demo** - prints a PCL Demo test page.
- **Print Self Test** - prints a Self Test page.

Note: *You may have to first configure the machine for the interface you have selected. You can do so using either the **[Parallel Menu]** or the **[Serial Menu]** selection from the Setup Menu.*

☛Refer to Chapter 2 "Using the Control Panel," for further information on testing the printing capabilities of the machine and on configuring the machine for printing.

2. USING THE CONTROL PANEL

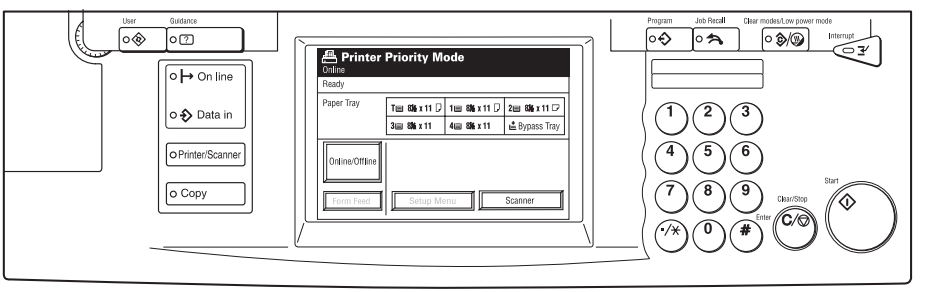
CONTROL PANEL FUNCTIONS

This chapter describes how you use the main buttons, numeric keypad, and Control Panel menus to configure and use the printer functions.

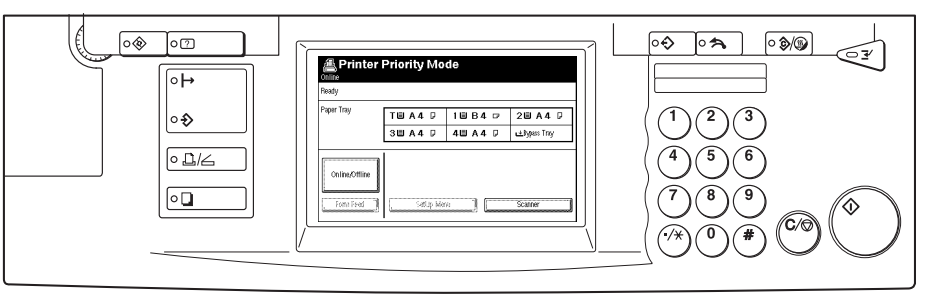
Note: *In general, you can provide most of the printer configuration specifications using the software applications (the word processing, spreadsheet software, and so forth) from which you are printing.*

You use the main buttons on the left side of the Control Panel, the numeric keypad on the right side of the Control Panel, and menu selections that display on the Control Panel screen to access the printer modes and to specify how you want the printer to function.

Control Panel (U.S. Version)



Control Panel (European Version)

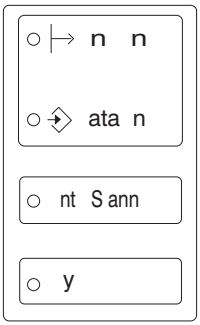


The display panel indicates the current status of the machine (for example, Printer Priority Mode).

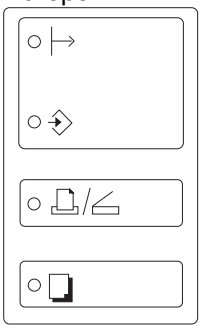
You can use the Control Panel to specify information such as which printer port you want to use and the how you want the printed output to look.

Using the Buttons and Keys

U.S.

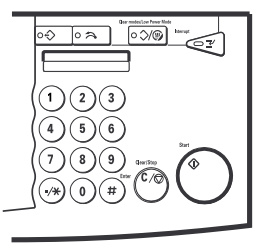


Europe

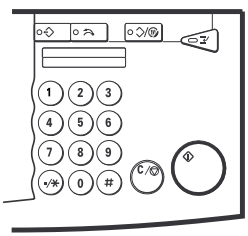


The machine has two light emitting diodes (LEDs) and two main buttons located on the left side of the Control Panel and a numeric keypad located on the right side of the Control Panel. You use these tools to configure the machine and to print.

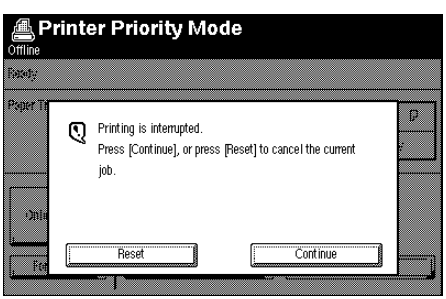
U.S.



Europe



You use these buttons, Numeric Keypad keys, and the selections that display on the Control Panel menu screen to access the printer modes and to specify how you want the printer to function.



The Control Panel displays the messages that indicate the current status of the printer, as well as error messages that indicate any problems that occur with the machine.

The Control Panel display is shared by all functions of the machine and displays the current status of the copy, print and scan jobs. After the printer has started a print job, the Control Panel contains the status for the printer. The "Status" area is blank when the machine is in Printer mode and the machine is offline.

The Control Panel also displays menus from which you can make printer configuration and print job selections.

When you first turn on the machine, the Copy Menu displays on the Control Panel. To access the Printer Mode menus, you must press the **[Printer/Scanner]** button located on the left side of the display panel. When you enter printer mode, you can use the various printer Configuration and Job Control menus to specify how you want the printer to function.

You will want to set your printer configuration default values when you first set up your printer. However, you should not have to change the printer configuration on a regular basis. ☛Refer to the "Configuration Menu" section in this chapter for information on how to use the Configuration Menu to configure the machine for printing.

There are numerous selections you can make for each print job. For example, you can select a different paper tray, set the printer to Printer Control Language (PCL), specify the image orientation (SEF or LEF), change the default font, specify the number of lines per page, and so forth.

Note: *Most applications allow you to make choices so that your document is correctly formatted for printing. You can also use the printer driver software to perform this task. Therefore, in general, you do not have to use the Control Panel to make these types of selections.*

When you send a document to the printer, the printed format and output of the document depends on the selections you have made using the menus available from the Control Panel, as well as the print commands that you send to the printer.

Frequently, the print commands associated with a document that you send to the printer are managed by the software application and the printer driver. When you send a formatted document to the printer, the appropriate print commands are sent to the printer so that your text and graphics are printed using the formatting choices you have made.

Most of the time, you can use your software to format your document and specify how it should print. These print commands override any Control Panel settings.

The two LED indicators and the two buttons located on the left side of the Control Panel work as follows:

U.S. Version
○ ⊢→ On line

European Version
○ ⊢→

- This LED indicates the online status of the machine. When the status of the machine is online, the title bar on the screen displays the current operation mode. The operation modes are Share Mode, Printer Only Mode, or Printer Priority Mode.

  Note: *When using the machine as a scanner, this LED is always lit.*

U.S. Version
○ Data in

European Version
○

- This LED indicator blinks when data is received from the host, and is on while the machine is operating or data is processed. Otherwise, this LED is off.

  Note: *During duplex and reverse order printing the LED is always off.*

U.S. Version
○ Printer/Scanner

European Version
○

- When you press this button, the machine is ready to print and the Control Panel displays the Printer screen for the current operation mode (for example, Printer Priority mode). You can access the Scanner mode from the screen that displays.

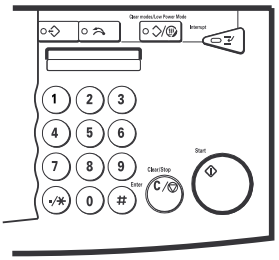
U.S. Version
○ Copy

European Version
○

- When you press this button, the machine is set to Copier mode when the current print job is complete, and the Copy Mode screen displays. An alert message displays until the current job is complete.

  When the machine is set to Printer Only or Scanner Only mode, this button is ignored and a beep sounds to indicate that the operation cannot be performed. You must use the "Mode" selection from the Configuration Menu to set the machine to Share mode or Printer Priority mode before you can use this button to access Copier mode.

  In addition, you cannot use this button to change to Copier mode when the status is offline. When you do so, a beep sounds to indicate that the operation cannot be performed. You must change the machine status to online before you can perform this task.

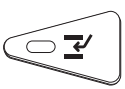


When you are using the machine as a printer, you can use the numeric keypad, the **[Interrupt]** button located on the upper right side of the Control Panel, and the **[Clear]** button located on the lower right side of the Control Panel as follows:

- Use these number keys as an alternate for entering values into the fields on the menu screens that display. Using these keys is the same as using the keys that display on the menu screens.

- Use this as the decimal when entering values into the fields on the menu screens that display. Using this decimal point is the same as using the decimal point that displays on the menu screen.

- Use this key to accept the data you have entered on the menu screens that display. Using this key is the same as using the **[Exit]** key that displays on the menu screens.



- When you set the machine to the Share Mode, you press this button to issue an interrupt command to the controller. When this occurs, the current print job is suspended after the current page prints and the machine switches to Interrupt Copy Mode. The alert message displays until printing of the current page is complete.

  When you press this button while the machine is in Interrupt Copy mode, or if no copy operation occurs after this button is pressed, an Interrupt Restart Command is automatically issued and the machine returns to online status. You cannot use this button when the status of the machine is offline. When you attempt to do so, a beep sounds to indicate that the operation cannot be performed. You must change the status of the machine to online before you can perform this task.

- **[C/ (Clear)]** - When you press this button it clears all values entered in Copier mode and resets the copy data to its default values.

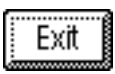
When you are using the machine as a printer, several keys display on the menu screens. These keys provide the same functionality when they are available on a menu. You use these keys as follows:

- **[Prev. Menu]** - press this key to access the previous menu screen.

- **[Prev.]** - press this key to access the previous page of the current menu. When this key does not display, or is ghosted, no previous page is available. When there is more than one page to the menu, the page number displays in the top right corner (for example, 1/2 to denote that you are currently on page one of two pages).

- **[Next]** - press this key to access the next page of the current menu. When this key does not display, or is ghosted, no next page is available. When there is more than one page to the menu, the page number displays in the top right corner (for example, 2/2 to denote that you are currently on page two of two pages).

- **[Cancel]** - press this key to cancel any changes you have made to the menu fields and return to the previous menu screen.

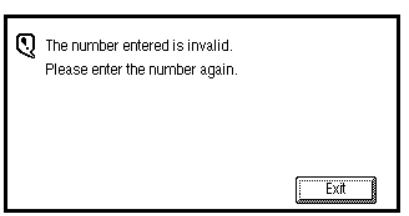


- **[Exit]** - press this key to save the changes you have made to the menu fields and return to the previous menu screen. This is the same as pressing the **[Enter]** key available on the Numeric Keypad located on the right side of the menu display.

- **[Clear]** - press this key to delete the value contained in the field on the menu. This key only displays on menus that require the use of numbers (using the numeric keypad on the screen or using the Numeric Keypad located to the right of the menu screen) to enter the field value.

- **[numbers]** - use the numeric keypad that displays on the screen to specify the value for the field on the menu. This is the same as using the Numeric Keypad keys located on the right side of the menu screen.

- **[decimal point]** - use this decimal point key to enter the decimal point in the value you are entering on the menu. When the decimal point does not display, you cannot use a decimal point in the field value. This is the same as using the decimal point key available on the Numeric Keypad located on the right side of the menu screen.

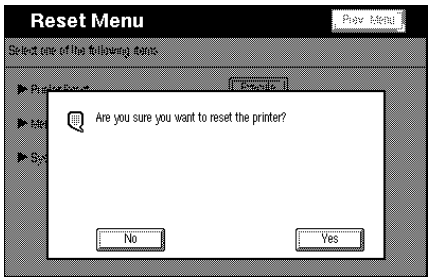


- **[Exit]** - when you have entered an incorrect value, or performed an incorrect action, an error message screen displays describing the error that occurred. You must press the **[Exit]** button to acknowledge the error and return to the menu, where you can respecify the value for the field.

- **[Reset]** - press this key when you want to cancel the job. The suspended job is canceled, and the machine returns to online status.

- **[Continue]** - press this key when you have removed the error condition or recognized the information that displays. The machine returns to online status and continues the job.

Performing Execute Operations

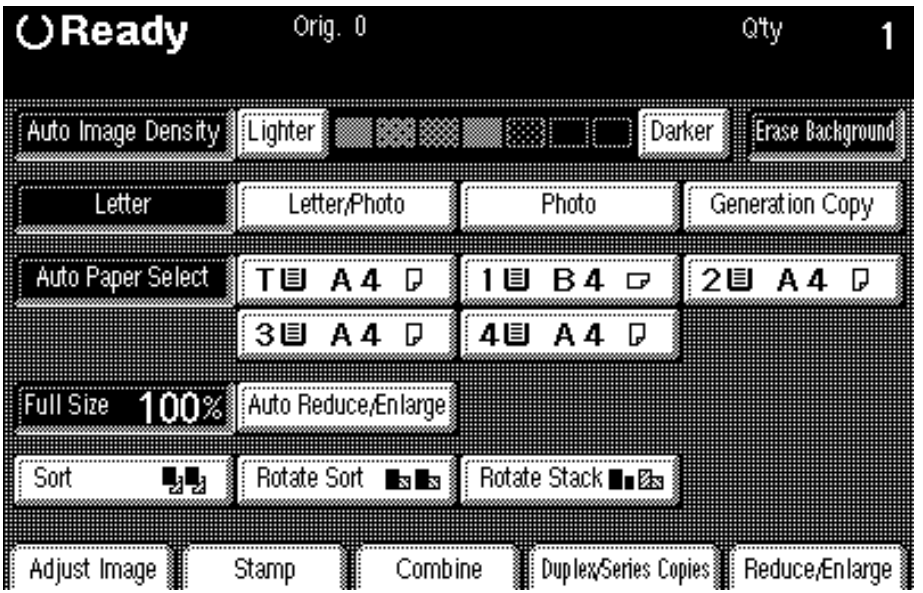


When you access a menu that allows you to execute a process, such as Reset, Flash, or Format, the Execute screen displays, requesting that you confirm that you want to execute the request.

You must press the **[Yes]** button from the Confirmation screen to continue the operation. The Execute progress screen displays until the operation is complete, at which time the Printer Priority Mode screen displays. If the execution fails a Failure screen displays. Press the **[Exit]** button on the Failure screen to return to the Printer Priority Mode screen. When you press the **[No]** button on the Confirmation screen, the operation is canceled and the previous screen displays.

ACCESSING MODES

When you first turn on the machine, the Copy menu displays on the Control Panel.



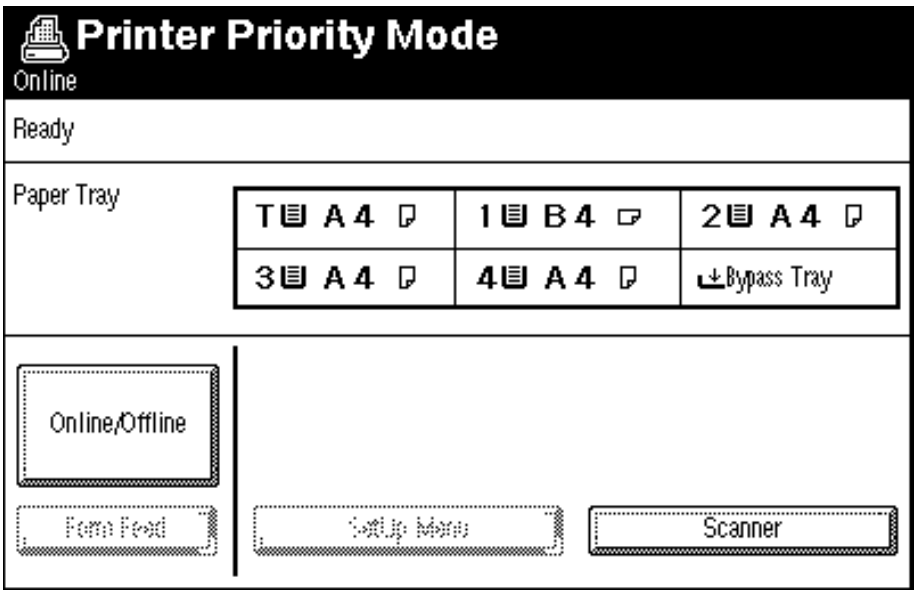
You cannot change from Copy mode to Printer mode in any of the following instances:

- A copy operation is in progress.
- The system is in Interrupt Copy mode.
- The system is in Program Setting mode within Copy mode.
- A printer error has occurred (for example, a paper jam).
- The system is set to User Tools mode.

Accessing Printer Mode

Follow these steps to access Printer mode from Copy mode:

1 From the Copy menu, press the **[Printer/Scanner]** button located on the left side of the display panel. The Printer mode menu displays.



Note: *The Scanner button displays only if the scanner option is installed. Paper Trays 2, 3, and 4 display only when these optional trays are installed. The Bypass Tray displays only when the Bypass Tray door is open.*

2 Make sure the printer status is set to online.

3 If the Printer status is set to offline, press the **[Online/Offline]** button.

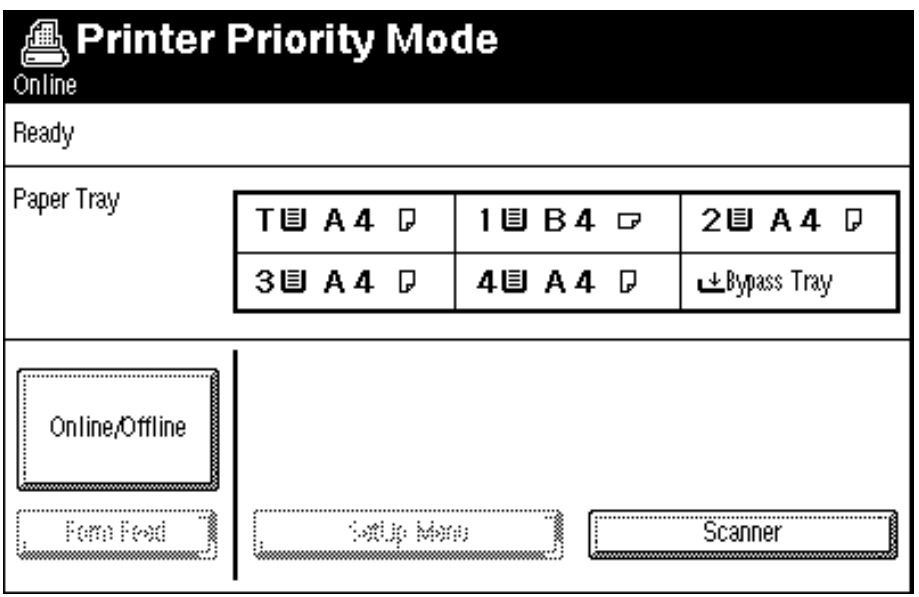
Follow these steps to access Copy mode from Printer mode:

1. From the Printer menu, press the **[Copy]** button located on the left side of the display panel.
2. Make sure the copier status is set to Ready.

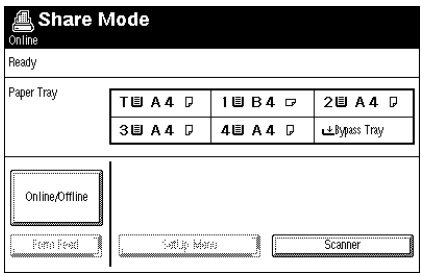
USING THE PRINTER MODE MENU

You use the buttons available on the Printer mode menu to select, access, or change any of the following:

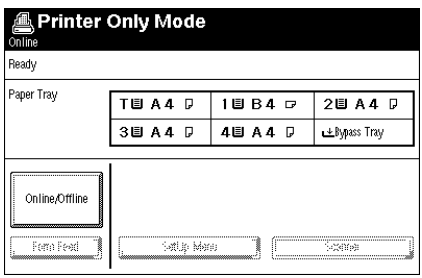
- **Paper Tray options**
- **Online/Offline status**
- **Form Feed request**
- **Setup Menu**
- **SCSI Scanner mode.**



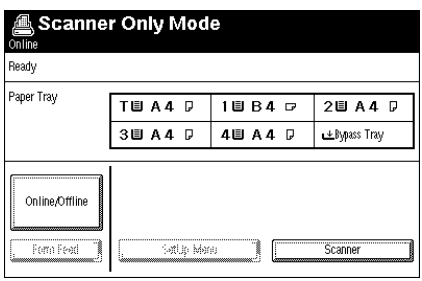
The top of the Printer mode menu displays the current mode of operation. These modes are as follows:



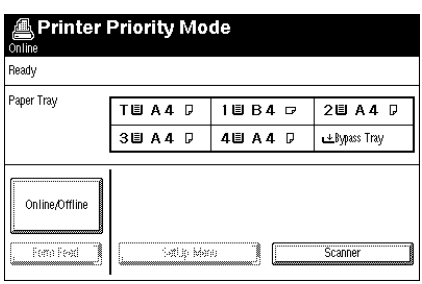
- **Share Mode** - indicates that you want to share the machine between copy, print, and scan modes with no specific priority.



- **Printer Only Mode** - indicates that you currently want to use the machine as a printer only.



- **Scanner Only Mode** - indicates that you currently want to use the machine as a scanner only.

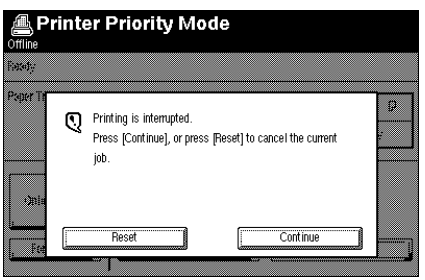


- **Printer Priority Mode** - this indicates that you want all print jobs to take priority. In this mode normal copying, printing, and scanning is enabled, and copy interrupt is disabled.

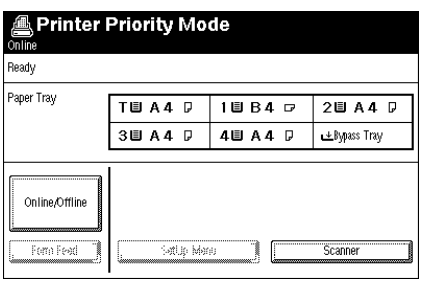
Note: *When Printer Only mode is specified, the Printer mode menu screen displays when you turn on the machine (rather than the Copy mode menu).*

The following information displays on the Printer mode menu:

- **Status Area** - displays the operation status of the printer.
  The operation status can be one of the following:
  - Warming up. Please wait. - indicates that the machine is warming up after having been turned on.
  - Ready - indicates that the printer function is ready for use.
  - Online - indicates that the printer function is online.
  - Offline - indicates that the printer function is offline.
  - Errors - indicates an error condition.



- **Message Area** - displays any error or indication messages necessary to notify you of the printer status. ☛Refer to the "Error messages" section of the Troubleshooting chapter in this Guide for further information on the various error and indication messages.



- **Paper Tray options** - displays information on the paper contained in each paper tray. This information includes text and icons that indicate the existence of paper, paper size, and paper orientation. When appropriate, recycled paper or special paper icons display.

Machine Status is indicated by an icon displayed in the Status Area of the Printer mode menu. The error conditions that they indicate are as follows:

The cover is open

The machine requires repair.

Tray Status is indicated by an icon displayed in the Paper Tray options area of the Printer mode menu. The Tray Status icons and the conditions they indicate are as follows:

The paper tray is closed and empty.

The paper tray is closed and paper is present.

No Icon No paper tray present.

Paper Status is indicated by an icon displayed in the Paper Tray options area of the Printer mode menu. The Paper Status icons and the conditions they indicate are as follows:

8½ x 11 The paper size (U.S.). Varies according to paper used.

A4 The paper size (Europe). Varies according to paper used.

The paper is Long Edge Feed (LEF).

The paper is Short Edge Feed (SEF).

Special paper.

Recycled Paper.

No Icon Normal paper.

The following buttons are available on the Printer mode menu:

- **[Online/Offline]** - allows you to set the printer status. The printer must be set to online to accept print and copy jobs. When the printer is set to online status and you press this button, the printer is set to offline status and the current job is suspended.

  The Alert message screen displays to notify you that the job was suspended, and the offline status displays in the Status area at the top of the screen. When this occurs during printing, the printing process is suspended after the current page is printed.

  When the printer status is online, you can send print jobs to the machine, and you can use the Print mode menu to change the online/offline status, or to access Scanner mode. When the printer status is offline, you can perform a Form Feed operation (in normal order printing only) and access the Setup menus you use to configure the machine for printing.

- **[Form Feed]** - allows you to request a form feed, which prints the page currently stored in memory (in normal order printing only). The form feed request is available only for PCL print jobs. You cannot use the form feed function for a PostScript print job.

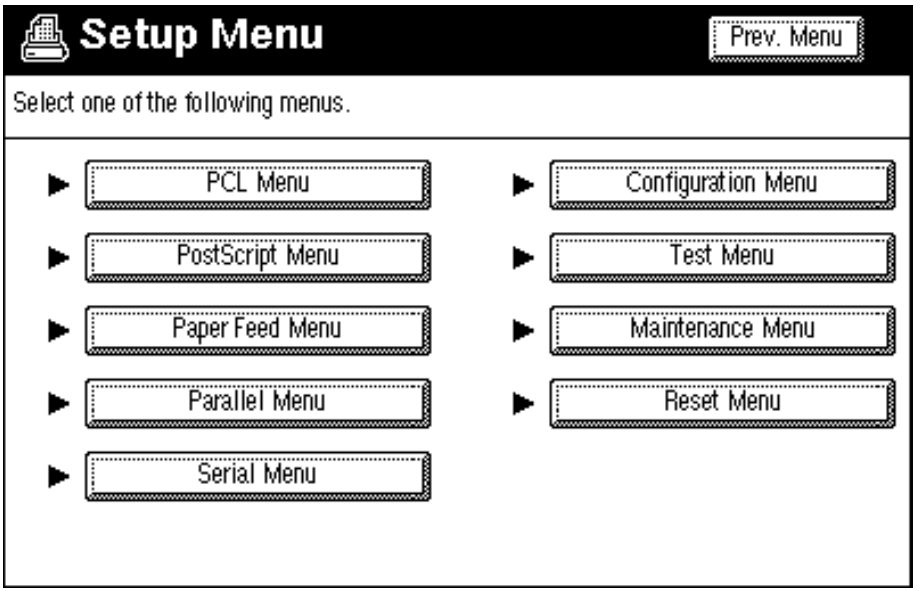
- **[Setup Menu]** - allows you to access the menus you use to configure the printer and to specify the print selections you want to use for your print jobs. You can only use this button when the Printer mode status is offline.

- **[Scanner]** - allows you to access the Scanner mode. This button displays only when you have the scanner option available on the machine.

  You can only use this button when the Printer mode status is online. When you press the button while a print job is in progress, an Alert message screen displays until the current job is complete, at which time the Scanner mode screen displays. When the Printer mode is set to Printer Only, this button is ghosted on the screen and does not function. When this occurs, you must use the "Mode" selection from the Configuration Menu to set the machine to Share Mode, Printer Priority Mode, or Scanner Only mode before you can access Scanner mode.

USING THE SETUP MENU

To access the Setup menu, press the **[Setup Menu]** button from the Printer mode menu.



The Setup menu contains the following options:

- **[PCL Menu]** - accesses the PCL Menu, allowing you to specify the options you want to use for PCL printing.
- **[PostScript Menu]** - accesses the PostScript Menu, allowing you to specify whether you want to obtain a printout of any PostScript errors that occur. This selection displays only when you have the PostScript option available on the machine.
- **[Feeder Menu]** - accesses the Feeder Menu, allowing you to specify the feeder and finishing options you want to use (in normal order printing only).
- **[Parallel Menu]** - accesses the Parallel Menu, allowing you to specify the parallel connection options you want to use.

- **[Serial Menu]** - accesses the Serial Menu, allowing you to specify the serial connection options you want to use.
- **[Network Menu]** - accesses the Network Menu, allowing you to specify the network timeout setting you want to use. This selection displays only when you have the PostScript option available on the machine.
- **[Configuration Menu]** - accesses the Configuration Menu, allowing you to specify the printer configuration options you want to use.
- **[Test Menu]** - accesses the Test Menu, allowing you to request the tests you want to perform to verify the functionality of the printer.
- **[Maintenance Menu]** - accesses the Maintenance Menu, allowing your service representative to perform maintenance operations, such as formatting the system, and to add or change password codes. This menu is password protected and is used only by your service representative.
- **[Reset Menu]** - accesses the Reset Menu, allowing you to reset the configuration values specified for the printer.

Note *Some of the menus listed above may not be available on the Setup menu depending on the options installed on your machine. For example, when you do not have the PostScript option available on your machine, the* ***[PostScript Menu]*** *button does not display.*

Accessing and Using Menus

To access a menu from the Setup Menu, press the button that corresponds to the menu you want to access. There are two types of Setting screens that display, one contains selections for the option you choose, the other allows you to use a numeric keypad to specify values for the field.

The current value for each option displays in the box located to the right of the option on the menu screen. To change the value for an option, press the **[Change]** button located beside the option you want to change. The Setting screen for that option displays.

When the screen contains selections, press the button for the selection you want to specify and press the **[Exit]** button to save the change and return to the previous menu screen.

When the screen contains numbers for use in entering a value, press the appropriate numbers that display on the Setting screen, or use the Numeric Keypad located to the right of the screen to enter the new value you want to use.

After you enter Setup changes, an alert screen is displayed. From this screen you specify when you want your changes to go into effect. The selections are as follows:

- **[Printer Reset]** - terminates the current print job and places your new settings into effect immediately.
- **[Continue]** - places your new settings into effect beginning at the next print job boundary and sets the machine to Online.

Using the PCL Menu

When you press the **[PCL Menu]** button from the Setup menu, the PCL menu displays. You use the PCL menu to set the PCL emulation configuration parameters. Although most software applications override these parameters, when an application does not, the values that display on this screen are used.

The options available on this screen are as follows:

- **Orientation**
- **Form Length**
- **Font Source**
- **Font Number**
- **Point Size**
- **Pitch**
- **Symbol Set**

Orientation Setting Screen

When you press the **[Change]** button for the Orientation option, the Orientation Setting screen displays.

You use this screen to specify the page orientation you want to use. The options are as follows:

- **Portrait** - specifies that you want to print across the width of the page.
- **Landscape** - specifies that you want to print across the length of the page.
  The default setting is **Portrait**.

Form Length Setting Screen

When you press the **[Change]** button for the Form Length option, the Form Length Setting screen displays.

You use the numerical keys to change the number of lines per page you want to use. The valid range is 5 to 128, entered in increments of 1. The default value is **60**. The Form Length value changes automatically when the Paper Size is changed.

Font Source Setting Screen

When you press the **[Change]** button for the Font Source option, the Font Source Setting screen displays.

You use this screen to specify the location of the default font. The options are as follows:

- **Internal** - specifies that you want to use the resident font as the default font.
- **Soft** - specifies that you want to use the font downloaded from the host machine as the default font. The default is Internal.

Font Number Setting Screen

When you press the **[Change]** button for the Font Number option, the Font Number Setting screen displays.

You use the numerical keys to change the value for the default font you want to use. The valid range is 0 to 50, entered in increments of 1. The default value is **zero (0)**.

Note: *You can obtain the value for the font you want to use from the PCL Font List.*

Point Size Setting Screen

When you press the **[Change]** button for the Point Size option, the Point Size Setting screen displays.

You use the numerical keys to change the value for the point size you want to use for the selected font. The valid range is 4.00 to 999.75, entered in increments of 0.25.

You can access this Setting screen only when the specified font is a scaleable, proportional font. The default value is **12**.

Pitch Setting Screen

When you press the **[Change]** button for the Pitch option, the Pitch Setting screen displays.

You use the numerical keys to change the value for the number of characters per inch you want to use for the selected font. The valid range is 0.44 to 99.99, entered in increments of 0.01. You can access this Setting screen only when the specified font is a scaleable, fixed pitch font. The default value is **10**.

Symbol Set Setting Screen

When you press the **[Change]** button for the Symbol Set option, the Symbol Set Setting screen displays.

You use this screen to specify the collection of print characters you want to use for the selected font. The options are as follows:

❒ **ROMAN-8**	❒ **PC-8 TK**	❒ **MS PUBL**	❒ **ISO 15**
❒ **ISO L1**	❒ **WIN L1**	❒ **MATH-8**	❒ **ISO 17**
❒ **ISO L2**	❒ **WIN L2**	❒ **VN MATH**	❒ **ISO 21**
❒ **ISO L5**	❒ **WIN L5**	❒ **PI FONT**	❒ **ISO 60**
❒ **PC-8**	❒ **DESKTOP**	❒ **LEGAL**	❒ **ISO 69**
❒ **PC-8 D/N**	❒ **PS TEXT**	❒ **ISO 4**	❒ **WIN 3.0**
❒ **PC-850**	❒ **VN INTL**	❒ **ISO 6**	
❒ **PC-852**	❒ **VN US**	❒ **ISO 11**	

The default is **ROMAN-8**.

PostScript Menu

When you press the **[PostScript Menu]** button from the Setup menu, the PostScript menu displays. You use the PostScript menu to specify whether you want to obtain a printout of any PostScript errors that occur.

The current value for the option displays in the box to the right of the option on the screen. To change the value for the option, press the **[Change]** button located beside the option. The Setting screen for that option displays. Print Errors is the only option available on this screen.

Print Errors Setting Screen

When you press the **[Change]** button for the Print Errors option, the Print Errors Setting screen displays.

You use this screen to specify whether you want to print the PostScript Error Report. The options are as follows:

- **Off** - specifies that you do not want the PostScript Error Report to print.
- **On** - specifies that you do want the PostScript Error Report to print.

The default is **Off**.

Feeder Menu

When you press the **[Feeder Menu]** button from the Setup menu, the Feeder menu displays. You use the Feeder menu to set the paper feed and finishing configuration parameters. Although most software applications override these parameters, when an application does not, the values that display on this screen are used.

The options available on this screen are as follows:

- **Page Size**
- **Paper Tray**
- **Auto Tray Switching**
- **Bypass Tray Timeout**
- **Output**
- **Stapling**
- **Separation**
- **Binding**

Note: *When the finisher is not installed, the Stapling option is not available and does not display on this screen. The Binding option is available only when duplex is selected.*

Page Size Setting Screen

When you press the **[Change]** button for the Page Size option, the Page Size Setting screen displays.

You use this screen to specify the paper size you want to use when paper size is not specified by your application. The options are as follows:

- ❒ **8½ x 11**
- ❒ **A4**
- ❒ **8½ x 14**
- ❒ **7½ x 10½**
- ❒ **B5**
- ❒ **A5**
- ❒ **A3**
- ❒ **B4**
- ❒ **11 x 17**
- ❒ **8½ x 13**
- ❒ **8 x 13**
- ❒ **8½ x 13**
- ❒ **5½ x 8½**
- ❒ **A6**

The default for North America is **8½ x 11**. The default for Europe is **A4**.

Note: • *When the specified paper size is not available in the machine when a print job is processed, the print job is suspended and the Error Suspend screen displays requesting operator interaction.*

• *8 x 10, 11 x 15, 10 x 14, and 8 x 10½ can not be used with the printer function although they can be used with the copier function.*

Paper Tray Setting Screen

When you press the **[Change]** button for the Paper Tray option, the Paper Tray Setting screen displays.

You use this screen to specify the paper feed tray you want to use when the paper tray is not specified by your application. Only the installed Trays will display. The options are as follows:

- ❒ **Auto**
- ❒ **Bypass Tray**
- ❒ **LCT**
- ❒ **Tray 1**
- ❒ **Tray 2**
- ❒ **Tray 3**
- ❒ **Tray 4**

The default is **LCT**.

The selection you make for this option goes into effect before the selection you made for the Page Size option. Therefore, when you want the Page Size option to take precedence, you must set this Paper tray option to **Auto**.

Auto Tray Switching Setting Screen

When you press the **[Change]** button for the Auto Tray Switching option, the Auto Tray Switching Setting screen displays.

You use this screen to specify whether you want the machine to automatically change the paper tray when the current paper tray becomes empty during a print job. When this feature is enabled and a tray runs out of paper, the machine searches for another paper tray that contains the same paper size and orientation, based on the specified tray search order.

When a paper tray runs out of paper during printing, the "No paper. Add xx Paper to xx Tray. Reset/Continue" message displays on the Control Panel.

When Auto Tray change is enabled, the following process occurs:

- When the correct paper size and orientation is available in another paper tray, the paper is fed automatically.
- The Reset key is canceled by the current print job.
- When a user presses the Continue key without adding paper, the paper is fed from the paper tray that most closely matches the specified paper size.
- When a user presses the Continue key after adding different paper, the newly added paper is used.

When Auto Tray change is disabled, the following process occurs:

- When the correct paper size and orientation is loaded, the paper is fed.
- The Reset key is canceled by the current print job.
- When a user presses the Continue key without adding paper, the "No paper. Add xx Paper to xx Tray. Reset/Continue" message displays again.
- When a user presses the Continue key after adding different paper, the newly added paper is used.

The options are as follows:

- **Off** - specifies that you do not want the machine to automatically change paper trays when the current tray becomes empty during the print job.
- **On** - specifies that you want the machine to automatically change paper trays when the current tray becomes empty during the print job and another tray contains paper of the same size and orientation.

The default is **On**.

Bypass Tray Timeout Setting Screen

When you press the **[Change]** button for the Bypass Tray Timeout option, the Bypass Tray Timeout Setting screen displays.

You use the numerical keys to change the number of seconds after which a message displays to request that the user open the Bypass Tray for use with the print job. The timer stops when the Bypass Tray is closed. The valid range is 5 to 300, entered in increments of 1. The default is 300 seconds.

When a print job specifies a Bypass Tray paper feed and the Bypass Tray door is closed, the "Please open the Bypass Tray" message displays. When the Bypass Tray is open but not paper is loaded, the "No Paper. Please add xx paper to Bypass Tray." message displays. When paper is loaded in the Bypass Tray, the paper feeds automatically until the job is complete. When a Large Capacity Tray (LCT) feed is specified in the following print job and the Bypass Tray has not been closed, the "Please close the Bypass Tray" message displays.

When either the "Please open the Bypass Tray" or the "No Paper. Please add xx paper to Bypass Tray." message displays and the user does not respond within the timeout period specified on this screen, the Bypass Tray print job is canceled and the next print job begins printing.

Output Setting Screen

When you press the **[Change]** button for the Output option, the Output Setting screen displays.

You use this screen to specify the output operation you want to use. For the 500 sheet tray or the finisher, the options are as follows:

- **Reverse** - specifies that the output is face-up and in ascending page order. When you select this option, the host input data is rasterized and stored in the order received. The data is then retrieved from the HDD and printed in reverse order so that the output is delivered face-up in the correct page sequence from page one to the end. When multiple originals are requested, the output consists of sets of originals in the correct page sequence (for example, three sets each in 1,2,3,4,5 page order).
- **Normal** - specifies that the data is printed immediately in the order received by the printer. You use the Normal option to obtain high speed printer performance. When you select this option, the host input data is rasterized and printed immediately, so that the output is in the sequence received by the printer. When multiple originals are requested, the output consists of sets of originals of each page (for example, three sets each in 1,1,1; 2,2,2; 3,3,3 page order).
- **Duplex** - specifies that the data is printed on both sides of each page, face-up, and in ascending page order. When you select this option, the host input data is rasterized. The odd numbered pages are stored in the HDD and the even numbered pages are printed and stacked in the duplex tray. When this process is complete, the odd numbered pages are retrieved from the HDD and printed on the reverse side of the stacked even numbered pages in reverse order, so that the output is delivered face-up in the correct page sequence from page 1 to the end. You can not print more than 50 originals at one time in this mode.

The default is **Reverse**.

For the 3-bin sorter, the options are as follows:

- **Reverse** - specifies that the output is face-up and in ascending page order. When you select this option, the host input data is rasterized and stored in the order received. The data is then retrieved from the HDD and printed so that the output is delivered face-down in the correct page sequence from page one to the end. When multiple originals are requested, the output consists of sets of originals in the correct page sequence (for example, three sets each in 1,2,3,4,5 page order).
- **Normal** - specifies that the data is printed immediately in the order received by the printer and delivered face-down. You use the Normal option to obtain high speed printer performance. When you select this option, the host input data is rasterized and printed immediately, so that the output is in the sequence received by the printer and delivered face-down. When multiple copies are requested, the output consists of a set of copies of each page (for example, three sets each in 1,1,1; 2,2,2; 3,3,3 page order).
- **Duplex** - specifies that the data is printed on both sides of each page, face-up, in the order received by the printer. When you select this option, the host input data is rasterized. The odd numbered pages are stored in the HDD and the even numbered pages are printed and stacked in the duplex tray. When this process is complete, the odd numbered pages are retrieved from the HDD and printed on the reverse side of the stacked even numbered pages in reverse order, so that the output is delivered face-up in the order received by the printer. You can not print more than 50 originals at one time in this mode.

The default is **Reverse**.

Stapling Setting Screen

When you press the **[Change]** button for the Stapling option, the Stapling Setting screen displays.

Note: *This Setting screen is available only when the finisher is installed.*

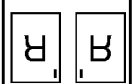
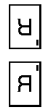
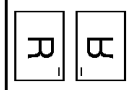
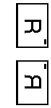
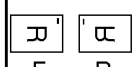
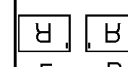
You use this screen to specify whether you want stapling, and if so, where you want the staple on the printed copy. The options are as follows:

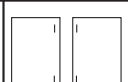
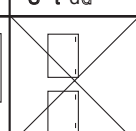
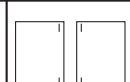
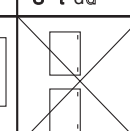
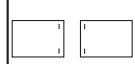
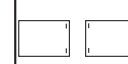
- **None** - specifies that you do not want stapling.
- **One Portrait** - specifies that you want one staple placed at the top left corner of the portrait page.
- **One Landscape** - specifies that you want one staple placed at the top left corner of the landscape page.
- **Two Portrait** - specifies that you want two staples on the portrait page. The staples are placed along the left side of the page when long edge feed is used. The staples are placed along the top of the page when short edge feed is used.
- **Two Landscape** - specifies that you want two staples on the landscape page. The staples are placed along the top of the page when long edge feed is used. The staples are placed along the left side of the page when short edge feed is used.

The default is **None**.

Note: *After adding the new staples, several pages will be printed without stapling.*

The following illustrates the one staple and two staple options for simplex and duplex printing. The X in the two staple illustration indicates output configurations that are not compatible because the binding edge and feeding egde do not match. Although the machine will perform these stapling configurations, they should be avoided.

	1 Staple					
	Portrait			Landscape		
	Simplex	Duplex Long Edge	Duplex Short Edge	Simplex	Duplex Long Edge	Duplex Short Edge
Long Edge Feed		 F R	 F R		 F R	 F R
Short Edge Feed		R F	 F R		F R	 F R

	Sta					
	tat			and a		
	S	n dd	S t dd	S	n dd	S t dd
n dd d						
S t dd d						

Separation Setting Screen

When you press the **[Change]** button for the Separation option, the Separation Setting screen displays.

You use this screen to specify whether you want the machine to automatically separate the print jobs. The separation is implemented either as a mechanical offset, or with a sheet of paper, and depends on the type of trays installed on your machine. Table 2-1 lists the separation used according to the installed tray types.

Note: *When using the Bypass tray, this function is not available.*

Table 2-1 Job Separation

Installed Tray Type	Offset	Sheet
1 Bin Tray		○
1 Bin Finisher	○	
3 Bin Sorter (1st Tray)	○	
3 Bin Sorter (2nd and 3rd Tray)		○

The separation setting options are as follows:

- **Off** - specifies that you do not want the machine to separate the print jobs.
- **On** - specifies that you want the machine to automatically separate the print jobs.

The default is **Off**.

Binding Setting Screen

When you press the **[Change]** button for the Binding option, the Binding Setting screen displays.

You use this screen to specify the setting you want to use to print a book or tablet print job in duplex mode. The options are as follows:

- **Long** - specifies that you want long edge binding, like a book.
- **Short** - specifies that you want short edge binding, like a calendar or tablet.

The default is **Long**.

Note: *This option is available only when the Output option is set to* ***Duplex****.*

Parallel Menu

When you press the **[Parallel Menu]** button from the Setup menu, the Parallel menu displays. You use the Parallel menu to set the parallel interface configuration parameters. Although most software applications override these parameters, when an application does not, the values that display on this screen are used.

The options available on this screen are as follows:

- **Personality**
- **Bidirectionality**
- **I/O Timeout**

Personality Setting Screen

When you press the **[Change]** button for the Personality option, the Personality Setting screen displays.

You use this screen to set the page description language you want to use for the print jobs received through the parallel port. The options are as follows:

- **Auto** - specifies that you want the page description language used for the print jobs to switch automatically based on the data received by the parallel port.
- **PCL** - specifies that you want to use the PCL page description language for the print jobs received by the parallel port.
- **PostScript** - specifies that you want to use the PostScript page description language for the print jobs received by the parallel port.

The default is **Auto**.

Bidirectionality Setting Screen

When you press the **[Change]** button for the Bidirectionality option, the Bidirectionality Setting screen displays.

You use this screen to specify the bi-directional operation on the parallel port. The options are as follows:

- **Off** - specifies that you do not want to allow two-way communication between the controller and the host.
- **On** - specifies that you want to allow two-way communication between the controller and the host.

The default is **Off**.

Note: *You can set the Bidirectionality option to **On** only when the software application located on the host supports a bi-directional parallel port.*

I/O Timeout Setting Screen

When you press the **[Change]** button for the I/O Timeout option, the I/O Timeout Setting screen displays.

You use the numerical keys to change the value for the number of seconds after which an incomplete print job should end and the next port in the polling sequence should be set. The valid range is 5 to 300, entered in increments of 1. The default is **30** seconds.

Serial Menu

When you press the **[Serial Menu]** button from the Setup menu, the Serial menu displays. You use the Serial menu to set the serial interface configuration parameters. Although most software applications override these parameters, when an application does not, the values that display on this screen are used.

The options available on this screen are as follows:

- **Personality**
- **Baud Rate**
- **Parity**
- **Handshake**
- **DTR Polarity**
- **Stop Bits**
- **Data Bits**
- **I/O Timeout**

Personality Setting Screen

When you press the **[Change]** button for the Personality option, the Personality Setting screen displays.

You use this screen to set the page description language you want to use for the print jobs received through the serial port. The options are as follows:

- **Auto** - specifies that you want the page description language used for the print jobs to switch automatically based on the data received by the serial port.
- **PCL** - specifies that you want to use the PCL page description language for the print jobs received by the serial port.
- **PostScript** - specifies that you want to use the PostScript page description language for the print jobs received by the serial port.

The default is **Auto**.

Baud Rate Setting Screen

When you press the **[Change]** button for the Baud Rate option, the Baud Rate Setting screen displays.

You use this screen to set the baud rate for the serial port in bits per second (bps). The baud rate is a unit used to measure the data transmission speed. The options are as follows:

- **1200**
- **2400**
- **4800**
- **9600**
- **19200**
- **38400**

The default is **9600** bps.

Note: *You must set the baud rate for the serial port to the same baud rate set at the host.*

Parity Setting Screen

When you press the **[Change]** button for the Parity option, the Parity Setting screen displays.

You use this screen to specify how the parity bit is used during error checking. The options are as follows:

- **None**
- **Odd**
- **Even**

The default is **None**.

Note: *You must set the parity for the serial port to the same parity setting as the host.*

Handshake Setting Screen

When you press the **[Change]** button for the Handshake option, the Handshake Setting screen displays.

You use this screen to specify the type of handshake that occurs between the serial port and the host. The options are as follows:

- **XON/XOFF**
- **DTR/DSR**
- **Robust XON**

The default is **XON/XOFF**.

DTR Polarity Setting Screen

When you press the **[Change]** button for the DTR Polarity option, the DTR Polarity Setting screen displays.

You use this screen to specify the polarity of the DTR for the serial port from the host. The options are as follows:

- **High**
- **Low**

The default is **High**.

Stop Bits Setting Screen

When you press the **[Change]** button for the Stop Bits option, the Stop Bits Setting screen displays.

You use this screen to specify the number of stop bits in each character. The options are as follows:

- **1**
- **2**

The default is **1**.

Note: *You must set the stop bits for the serial port to the same stop bit setting as the host.*

Data Bits Setting Screen

When you press the **[Change]** button for the Data Bits option, the Data Bits Setting screen displays.

You use this screen to specify the number of data bits in each character. The options are as follows:

- ❒ **8**
- ❒ **7**

The default is **8**.

Note: *You must set the stop bits for the serial port to the same stop bit setting as the host.*

Network Menu

When you press the **[Network Menu]** button from the Setup menu, the Network menu displays. You use the Network menu to specify the network timeout setting you want to use.

The current value for the option displays in the box to the right of the option on the screen. To change the value for the option, press the **[Change]** button located beside the option. The Setting screen for that option displays. I/O Timeout is the only option available on this screen.

I/O Timeout Setting Screen

When you press the **[Change]** button for the I/O Timeout option, the I/O Timeout Setting screen displays.

You use the numerical keys to change the value for the number of seconds after which an incomplete print job should end and the next port in the polling sequence should be set. The valid range is 5 to 300, entered in increments of 1. The default is **30** seconds.

Configuration Menu

When you press the **[Configuration Menu]** button from the Setup menu, the Configuration menu displays. You use the Configuration menu to specify the printer configuration options you want to use. Although most software applications override these parameters, when an application does not, the values that display on this screen are used.

The options available on this screen are as follows:

- **Resolution**
- **Copies**
- **Jam Recovery**
- **Auto Continue**
- **Spooling**
- **Smoothing**
- **Mode**
- **SCSI ID**

Resolution Setting Screen

When you press the **[Change]** button for the Resolution option, the Resolution Setting screen displays.

You use this screen to specify the print resolution in dots per inch (dpi). The options are as follows:

- **300**
- **400**
- **600**

The default is **400** dpi.

Copies Setting Screen

When you press the **[Change]** button for the Copies option, the Copies Setting screen displays.

You use the numerical keys to change the value for the number of copies of each page that will print for each print job. The valid range is 1 to 999, entered in increments of 1. The default is **1** copy. The value you enter in the field is limited by the paper output tray specifications.

Jam Recovery Setting Screen

When you press the **[Change]** button for the Jam Recovery option, the Jam Recovery Setting screen displays.

You use this screen to specify whether you want the jam recovery feature on or off. When a printing paper jam occurs while the jam recovery feature is on, all pages affected by the paper jam are reprinted. The options are as follows:

- **Off** - specifies that you do not want the jam recovery.
- **On** - specifies that you do want jam recovery.

The default is **On**.

Note: *When the Jam Recovery feature is set to On, the data for a page is until the page exits the printer. Therefore, printer performance may be lower than when the Jam Recovery feature is set to Off.*

Auto Continue Setting Screen

When you press the **[Change]** button for the Auto Continue option, the Auto Continue Setting screen displays.

You use this screen to specify whether you want the printer to control the continuation of printing after a system error occurs. The options are as follows:

- **Off** - specifies that you do not want printing to continue automatically.
- **On** - specifies that you do want printing to continue automatically.

Note: *When a error occurs stating the system cannot be recovered, these options are not valid and you must reset the machine.*

The default is **On**.

Spooling Setting Screen

When you press the **[Change]** button for the Spooling option, the Spooling Setting screen displays.

You use this screen to specify whether you want to use the hard disk to spool the print jobs. The options are as follows:

- **Off** - specifies that you do not want to use the hard disk to spool the print jobs.
- **On** - specifies that you do want to use the hard disk to spool the print jobs.

The default is **Off**.

Note: *The spooling function is enabled only when the Parallel Port Bidirectionality setting is **Off**.*

Smoothing Setting Screen

When you press the **[Change]** button for the Smoothing option, the Smoothing Setting screen displays.

You use this screen to specify whether you want to use the paper edge smoothing feature. The options are as follows:

- **Off** - specifies that you do not want to use the paper edge smoothing feature.
- **On** - specifies that you do want to use the paper edge smoothing feature.

The default is **On**.

Mode Setting Screen

When you press the **[Change]** button for the Mode option, the Mode Setting screen displays.

You use this screen to specify the operation mode for the machine. The options are as follows:

- **Share** - indicates that you want to share the machine between copy, print, and scan modes with no specific priority.
- **Printer Only** - indicates that you currently want to use the machine as a printer only.
- **Scanner Only** - indicates that you currently want to use the machine as a scanner only.
- **Printer Priority** - indicates that you want all print jobs to take priority. The default is Share.

Note: *When Printer Only Mode is specified, the Printer mode menu screen displays when you turn on the machine (rather than the Copy mode menu).*

SCSI ID Setting Screen

When you press the **[Change]** button for the SCSI ID option, the SCSI ID Setting screen displays.

You use this screen to specify the SCSI ID. The options are as follows:

- **0**
- **1**
- **2**
- **3**
- **4**
- **5**
- **6**
- **7**

The default is **3**.

Test Menu

When you press the **[Test Menu]** button from the Setup menu, the Test menu displays. You use the Test menu to request the test pages you want to print to verify the functionality of the printer.

To print a test page, press the **[Print]** button located beside the test you want to perform. The machine prints the test page you selected.

The tests available on this screen are as follows:

- **Print PS Fonts** - prints a PS Fonts test page.
- **Print PCL Fonts** - prints a PCL Fonts test page.
- **Print PS Demo** - prints a PS Demo test page.
- **Print PCL Demo** - prints a PCL Demo test page.
- **Print Self Test** - prints a Self Test page.

Reset Menu

When you press the **[Reset Menu]** button from the Setup menu, the Reset menu displays. You use the Reset menu to reset the configuration values specified for the printer.

To perform a reset function, press the **[Execute]** button located beside the function you want to perform.

The reset functions available on this screen are as follows:

- **Printer Reset** - cancels the print jobs currently being processed and clears the temporary soft fonts, temporary macros, and stored page data from memory. This function clears all page images intended for reverse printing from the disk and ejects any duplex printing pages contained in the duplex bin. This function does not change any of the menu settings.

- **Menu Reset** - performs a Printer Reset function and restores some of the menu settings to their system default values. You use the Reset Menu function to restore to the default settings those values that have been changed by users, while retaining those values set based on the physical printer setup. The parameters that are not restored to the default values are as follows:

  - **Bypass Tray Size**
  - **Bidirectionality**
  - **Baud Rate**
  - **Parity**
  - **Handshake**
  - **DTR Polarity**
  - **Stop Bits**
  - **Data Bits**
  - **SCSI ID**
  - **Passwords**

- **System Reset** - performs a System Reset function and restores all of the menu settings, except for Page Count, to the system default values.

Note: *You should perform a System Reset when you first activate your machine to make sure that all of the NVRAM system defaults are initialized and set correctly.*

When you press the **[Execute]** button for any of the reset functions, the Confirmation screen displays.

Press the **[Yes]** button on the Confirmation screen to continue with the reset function. The In Progress screen displays, notifying you that the reset function is being performed.

When the reset function is complete, the Printer Priority Mode screen displays and the machine status is set to Online and Ready.

If you performed a reset from the Reset Menu or from a System Reset, the mode setting is set to **Share**.

SWITCHING BETWEEN EMULATIONS

The printer automatically switches the print input between the PCL 5e and PostScript languages. You use the Parallel menu or the Serial menu to specify the personality settings you want to use for the parallel and serial ports. You can specify PCL, PostScript, or Automatic Switching.

The network port is always set to Automatic Switching.

3. USING THE PRINTER DRIVERS

OVERVIEW

This chapter provides information on using the PCL 5e and PostScript printer driver software provided with the machine.

Note: • *If you are using Stapling or Job Separation, do not turn on Collation from your software application - use the machine Control Panel instead. If you select Collation from an application (e.g. MS Word), it will only apply to the first batch of a job.*

• *You must use the printer driver designed for this machine for best results.*

PCL 5E PRINTER DRIVER

The machine is provided with software containing PCL 5e printer language for Windows 3.1 and Windows 95.

You use the standard Windows 3.1 or Windows 95 PCL printer driver software to print documents from your applications. You can also use the PCL driver to change printer settings independently of your applications.

Note: *You can use the printer Control Panel to change many of the printer settings. However, the selections you make using the printer driver software overrides your Control Panel selections.*

Windows 3.1

This sections contains information on the PCL 5e print parameters and options available for your Windows 3.1 system.

Setup Window

In general, you access the Setup window by selecting "Print" or "Print Setup" from the File menu available from your application. You can also access the Setup window by accessing the Control Panel and double-clicking on "Printers." A list of the currently available printers displays. Select the printer you want to use and click the **[Setup]** button to access the Setup window.

The **[Options]** button available on this window accesses the Options window. The **[Fonts]** button access the Font Installer window, which you use to install fonts when necessary. The **[Configuration]** button accesses the Configuration window, which you use to specify the input and output paper devices.

The following lists the descriptions and parameters for the fields contained on the Setup window.

Field	Parameter	Description
Paper Size	8.5 x 11 in 8.5 x 14 in 11 x 17 in 7.25 x 10.5 in 5.5 x 8.5 in A3 (297 x 420 mm) A4 (210 x 297 mm) A5 (148 x 210 mm) A6 (105 x 148 mm) B4 (257 x 364 mm) B5 (182 x 257 mm) 8 x 13 in 8.5 x 13 in 8.25 x 13 in	Allows you to specify the output paper size you want to use. When you are formatting your job, you can select any paper size, regardless of the limitations of the currently selected input tray. This allows you to format your job for any paper size and select the correct paper tray when you want to print the job. The Measurement setting for the host PC is verified when the driver is installed. The default paper size is **A4** when the Measurement setting is Metric and is **8.5 x 11** when the Measurement setting is not metric. The default value for North America is **8.5 x 11 in**. The default value for Europe is **A4**.

Field	Parameter	Description
Paper Source	Auto Tray Select Large Capacity Tray Tray 1 Tray 2 Tray 3 Tray 4 Bypass Tray	Allows you to specify the input paper tray you want to use. The default value is **Auto Tray Select**.
Copies	1 to 999	Allows you to specify the number of copies you want to print. You can enter this parameter using your keyboard or using the incremental spin buttons. The default value is **1**.
Orientation	Portrait Landscape	Allows you to specify the orientation of the printed output. The default value is **Portrait**.

Options Window

To access the Options window, click the **[Options]** button available on the Setup window. The following lists the descriptions and parameters for the fields contained on the Options window.

Field	Parameter	Description
Halftone	Text Photographic	Allows you to specify the Halftone resolution you want to use. The default value is **Text**.
Graphics Mode	HP-GL/2 Raster	Allows you to specify the graphic print quality. The default value is **HP-GL/2**.
Graphics Quality	High Medium Low	Allows you to specify the print quality you want to use. The default value is **High**.

Field	Parameter	Description
Print TrueType as Graphics	On Off	Allows you to specify whether you want to print TrueType fonts as graphics. This field is only active when you specify Raster as the Graphics Mode and High as the Graphics Quality. The default value is **Off**.
Reverse Print Order	On Off	Allows you to specify whether you want to use the Reverse Print Order feature, which delivers the printed output face-up in the correct order. When you enable this feature, the host input data is rasterized and stored in the order received. The data is then retrieved from the HDD and printed in reverse order so that the output is delivered face-up in the correct page sequence from page 1 to the end. When you request multiple copies, the output consists of sets of copies in the correct page sequence (for example, three sets each in 1,2,3,4,5 page order). The default value is **On**.
Job Separation	On Off	Allows you to specify whether you want to use Job Separation, indicating that you want the machine to automatically separate the print jobs. The separation is implemented either as a mechanical offset, or with a sheet of paper, depending on the type of trays installed on the machine. When a mechanical offset is used, the finisher activates a jogger mechanism that moves the shift tray slightly to the right or to the left for each job. This makes it easy to determine where the end of a set or job occurs. Job separation is especially useful for separating collated jobs. The default value is **Off**.

Field	Parameter	Description
Duplex	Off Long Edge Binding Short Edge Binding	Allows you to specify that you want the output printed in duplex format. Off specifies that you do not want to use duplex printing. Long Edge Binding specifies that, when printing in Portrait mode, you want to bind your output along the left edge of the paper, like a book. In Landscape mode, this setting produces output that you can bind along the top edge of the paper, like a calendar. Short Edge Binding specifies that, when printing in Portrait mode, you want to bind your output along the top edge of the paper, like a calendar. In Landscape mode, this setting produces output that you can bind along the left edge of the paper, like a book. The default value is **Off**.
Edge Smoothing	On Off	Allows you to specify that you want to use the Edge Smoothing feature, thus enhancing print quality. When Edge Smoothing is enabled, the printer reduces ragged edges, providing printed output with smooth curved and diagonal lines. The default value is **On**.
Printer Output Tray	1st Output Bin 2nd Output Bin 3rd Output Bin	Allows you to specify that you want to use the printer output tray and to select the output tray you want to use. The default value is **2nd Output Bin**.
Staple	Off 1 Staple 2 Staples	Allows you to specify whether you want to use the stapling option, and if so, how many staples you want to use to staple the printed output. This feature is available only when the optional stapler is installed Off species that you do not want stapling. The default value is **Off**.
Resolution	600 dpi 300 dpi	Allows you to specify the output resolution for the printer. The default value is **300 dpi**.

Font Installer Window

To access the Font Installer window, click the **[Fonts]** button available on the Setup window. You use the Font Installer window to install fonts when necessary.

The following lists the descriptions and parameters for the fields contained on the Font Installer window. The Font Installer window contains the **[Move]** button you use to move the selected font, the **[Copy]** button you use to copy the selected font, the **[Delete]** button you use to delete the selected font and the **[Edit]** button you use to make changes to the selected font. The Font Installer window also contains the **[Add Fonts]** button you use to install new fonts and the **[Copy Fonts to a New Port]** button you use to copy the selected fonts to the port you specify.

Field	Parameter	Description
Select a Font	List box containing the fonts currently installed	Allows you to select the Font you want to use, modify, delete edit, or copy. The font you select displays in the area located on the right of the screen.
Status	Permanent Temporary	Allows you to specify whether the changes to the selected font are permanent or temporary.

Configuration Window

To access the Configuration window, click the **[Configuration]** button available on the Setup window. You use the Configuration window to specify the input and output paper devices. The following lists the descriptions and parameters for the fields contained on the Configuration window.

Field	Parameter	Description
Input Paper Device	None 1000-sheet Tray Unit 1500-sheet Tray Unit	Allows you to specify that you want to use an optional input tray when one is installed. You select the optional tray you want to use from that list that displays. The list that displays is based on the optional input trays that are available on the machine. The default value is **None**.
Output Paper Device	Copy Tray 3-bin Sorter Finisher	Allows you to specify that you want to use an optional output device when one is installed. You select the optional device you want to use from that list that displays. The list that displays is based on the optional output devices that are available on the machine. The default value is **Copy Tray**.

Windows 95

This sections contains information on the PCL 5e print parameters and options available for your Windows 95 system.

Properties Window

In general, you access the Properties window by selecting Print from the File menu and clicking the **[Properties]** button, or by selecting Print Setup from the File menu when available from your application. You can also access the Properties window by clicking the **[Start]** button and selecting Printers from the Settings submenu. A list of icons representing the printers available to you displays. Double-click on the icon that represents the printer you want to use. The Printers window displays with a list of the currently queued print jobs displays. Select Properties from the Printer menu available on the Printers window. The Properties window displays.

Depending on the manner in which you access it, the Properties window contains from four to six tabs. You use these tabs to specify the parameters and options you want to use for your print jobs.

General Tab

The General tab displays only when you access the Properties window using the "Printers" selection from the Settings submenu. This tab contains general description information about the printer and allows you to print a test page. Refer to the documentation provided with your operating system for further information on this tab.

Details Tab

The Details tab displays only when you access the Properties window using the "Printers" selection from the Setting. This tab contains setup information about the printer driver and the printer ports. Refer to the documentation provided with your operating system for further information on this tab.

Paper Tab

The following lists the descriptions and parameters for the fields contained on the Paper tab.

Field	Parameter	Description
Paper Size	8.5 x 11 in 8.5 x 14 in 11 x 17 in 7.5 x 10.5 in 5.5 x 8.5 in A3 (297 x 420 mm) A4 (210 x 297 mm) A5 (148 x 210 mm) A6 (105 x 148 mm) B4 (257 x 364 mm) B5 (182 x 257 mm) 8 x 13 in 8.5 x 13 in 8.25 x 13 in	Allows you to specify the output paper size you want to use. When you are formatting your job, you can select any paper size, regardless of the limitations of the currently selected input tray. This allows you to format your job for any paper size and select the correct paper tray when you want to print the job. The Measurement setting for the host PC is verified when the driver is installed. The default paper size is **A4** when the Measurement setting is Metric and is **8.5 x 11** when the Measurement setting is not metric. The default value for North America is **8.5 x 11 in**. The default value for Europe is **A4**.
Paper Source	Auto Tray Select Large Capacity Tray Tray 1 Tray 2 Tray 3 Tray 4 Bypass Tray	Allows you to specify the input paper tray you want to use. The default value is **Auto Tray Select**.
Copies	1 to 999	Allows you to specify the number of copies you want to print. You can enter this parameter using your keyboard or using the incremental spin buttons. The default value is **1**.
Orientation	Portrait Landscape	Allows you to specify the orientation of the printed output. The default value is **Portrait**.

Graphics Tab

The Graphics tab includes a **[Font]** button you use to access the Font Installer window. You use the Font Installer window to install fonts when necessary (refer to the Font Installer Window" section in this chapter for further information on the Font Installer window).

The following lists the descriptions and parameters for the fields contained on the Graphics tab.

Field	Parameter	Description
Halftone	Text Photographic	Allows you to specify the Halftone resolution you want to use. Selecting Text provides lower resolution and faster printing speeds. The default value is **Text**.
Graphics Mode	HP-GL/2 Raster	Allows you to specify the graphic print quality. Selecting HP-GL/2 provides faster printing speeds with slightly diminished print quality. Selecting Raster incorporates raster and bitmap formats and produces high print quality. The default value is **HP-GL/2**.
Print TrueType as Graphics	On Off	Allows you to specify whether you want to print TrueType fonts as graphics. This field is only active when you specify Raster as the Graphics Mode. The default value is **Off**.
Resolution	600 dpi 300 dpi	Allows you to specify the output resolution for the printer. The default value is **300 dpi**.
Edge Smoothing	On Off	Allows you to specify that you want to use the Edge Smoothing feature, thus enhancing print quality. When Edge Smoothing is enabled, the printer reduces ragged edges, providing printed output with smooth curved and diagonal lines. Edge smoothing results in reduced printing speeds. The default value is **On**.
Graphics Quality	High Medium Low	Allows you to specify the print quality you want to use. The value is automatically set to **High** when you select **HP-GL/2** as the Graphics Mode, regardless of what you specify in this field. The default value is **High**.

Device Options Tab

The following lists the descriptions and parameters for the fields contained on the Device Options tab.

Field	Parameter	Description
Reverse Print Order	On Off	Allows you to specify whether you want to use the Reverse Print Order feature, which delivers the output face-up in the bin in ascending order. When you enable this feature, the host input data is rasterized and stored in the order received. The data is then retrieved from the HDD and printed in reverse order so that the output is delivered face-up in the correct page sequence from page 1 to the end. When you request multiple copies, the output consists of sets of copies in the correct page sequence (for example, three sets each in 1,2,3,4,5 page order). When you select **Long Edge Binding** or **Short Edge Binding** as the Duplex option, do not send the OUTPUT PJL command. When you select **1 Staple** or **2 Staples** as the Staple option, make to send the OUTPUT PJL command with the **REVERSE** setting specified. When you select **Bypass Tray** as the Paper Source options, make sure to send the OUTPUT PJL command with the **NORMAL** setting specified. The default value is **On**.
Job Separation	On Off	Allows you to specify whether you want to use Job Separation, indicating that you want the machine to automatically separate the print jobs. The separation is implemented either as a mechanical offset, or with a sheet of paper, depending on the type of trays installed on the machine. When a mechanical offset is used, the finisher activates a jogger mechanism that moves the shift tray slightly to the right or to the left for each job.This makes it easy to determine where the end of a set or job occurs. Job separation is especially useful for separating collated jobs. This option is available only when the optional finisher is installed. The default value is **Off**.

Field	Parameter	Description
Duplex	Off Long Edge Binding Short Edge Binding	Allows you to specify that you want the output printed in duplex format. Off specifies that you do not want to use duplex printing. Long Edge Binding specifies that, when printing in Portrait mode, you want to bind your output along the left edge of the paper, like a book. In Landscape mode, this setting produces output that you can bind along the top edge of the paper, like a calendar. Short Edge Binding specifies that, when printing in Portrait mode, you want to bind your output along the top edge of the paper, like a calendar. In Landscape mode, this setting produces output that you can bind along the left edge of the paper, like a book. The default value is **Off**.
Staple	Off 1 Staple 2 Staples	Allows you to specify whether you want to use the stapling option, and if so, how many staples you want and where you want to staple the printed output. This feature is available only when the optional stapler is installed. Off species that you do not want stapling. The default value is **Off**.
Printer Output Tray	1st Output Bin 2nd Output Bin 3rd Output Bin	Allows you to specify that you want to use the printer output tray and the output you want to use. The default value is **2nd Output Bin**.

Configuration Tab

The following lists the descriptions and parameters for the fields contained on the Configuration tab.

Field	Parameter	Description
Input Paper Device	None 1000-sheet Tray Unit 1500-sheet Tray Unit	Allows you to specify that you want to use an optional input tray when one is installed. You select the optional tray you want to use from that list that displays. The list is based on the optional input trays that are available on the machine. The default value is **None**.
Output Paper Device	Copy Tray 3-bin Sorter Finisher	Allows you to specify that you want to use an optional output device when one is installed. You select the optional device you want to use from that list that displays. The list is based on the optional output devices that are available on the machine. The default value is **Copy Tray**.

POSTSCRIPT PRINTER DRIVER

A Windows 3.1 or Windows 95 PostScript printer driver is available as an option for the machine. The optional PostScript printer driver allows the machine to support Adobe PostScript Level II. The PostScript option also allows you to download PostScript Type I fonts and includes a rasterizer that allows you to download TrueType fonts as soft fonts.

Note: *You can use the printer Control Panel to change many of the printer settings. However, the selections you make using the printer driver software overrides your Control Panel selections.*

Windows 3.1

This section contains information on the PostScript print parameters and options available for your Windows 3.1 system.

Properties Window

In general, you access the Properties window by selecting "Print" or "Print Setup" from the File menu available from your application. You can also access the Properties window by accessing the Control Panel and double-clicking on "Printers." A list of the currently available printers displays. Double-click on the printer you want to use. The Printer window displays, providing a list of the current print jobs. Double-click on **[Properties]** to access the Properties window.

The Properties window contains six tabs. You use these tabs to specify the parameters and options you want to use for your print jobs.

Paper Tab

The following lists the descriptions and parameters for the fields contained on the Paper tab.

Field	Parameter	Description
Output Format	PostScript Encapsulated PostScript	Allows you to select the PostScript output you want to use. PostScript enables normal printing. Encapsulated PostScript creates a single page image file that you can use with applications that accept this file format. The default value is **PostScript**.

Field	Parameter	Description
Paper Source	Auto Tray Select Tray 1 Tray 2 Tray 3 Tray 4 Bypass Tray Large Capacity Tray	Allows you to specify the input paper tray you want to use. The default value is **Auto Tray Select.**
Paper Size	8.5 x 11 in 8.5 x 14 in 11 x 17 in 7.5 x 10.5 in 5.5 x 8.5 in A3 (297 x 420 mm) A4 (210 x 297 mm) A5 (148 x 210 mm) A6 (105 x 148 mm) B4 (257 x 364 mm) B5 (182 x 257 mm) 8.25 x 13 in 8.5 x 13 in 8 x 13 in	Allows you to specify the output paper size you want to use. A window displays an image of the selected paper size. The default value for North America is **8.5 by 11 in**. The default value for Europe is **A4**.
Orientation	Portrait Landscape Rotated Landscape	Allows you to specify the orientation of the printed output. The default value is **Portrait**.
Scaling	25 to 400 percent	Allows you to specify the percent of scaling to enlarge or reduce the printed image. The default value is **100%**.

Field	Parameter	Description
Copies	1 to 999	Allows you to specify the number of copies you want to print. You can enter this parameter using your keyboard or using the incremental spin buttons. The default value is **1**.
Watermarks	(None) CONFIDENTIAL COPY DRAFT	Allows you to print a simulated watermark on each page of your printed document. When you choose a watermark, you can limit the watermark to print only on the first page by checking the First Page Only checkbox. The default value is **(None)**.
Layout	1 page up/sheet 2 pages up 4 pages up 6 pages up 9 pages up 16 pages up	Allows you to specify the number of multiple pages you want to print on a single sheet of paper. When you want to print multiple pages, you can specify that you want to print a border around the page by checking the Print Page Border checkbox. The default value is **1 up**.

Features Tab

The following lists the descriptions and parameters for the fields contained on the Features tab. To specify the printer parameters you want, use the drop-down list boxes to select the option you want to use for each available feature. The items that display depend on the options you have available on the machine.

Field	Parameter	Description
Duplex	Off Long Edge Binding Short Edge Binding	Allows you to specify that you want the output printed in duplex format. Off specifies that you do not want to use duplex printing. Long Edge Binding specifies that, when printing in Portrait mode, you want to bind your output along the left edge of the paper, like a book. In Landscape mode, this setting produces output that you can bind along the top edge of the paper, like a calendar. Short Edge Binding specifies that, when printing in Portrait mode, you want to bind your output along the top edge of the paper, like a calendar. In Landscape mode, this setting produces output that you can bind along the left edge of the paper, like a book. The default value is **Off**.
Total Printer Memory	8, 16, 24, 32 or 40 MB or more	Allows you to specify how much of the printer memory is available. The default value is **8 MB**.

Field	Parameter	Description
Separation	True False	Allows you to specify whether you want to use the job separation feature provided by the optional finisher. The separation is implemented either as a mechanical offset, or with a sheet of paper, depending on the type of trays installed on the machine. When a mechanical offset is used, the finisher activates a jogger mechanism that moves the shift tray slightly to the right or to the left for each job. This makes it easy to determine where the end of a set or job occurs. Job separation is especially useful for separating collated jobs. This option is available only when the optional finisher is installed. The default value is **False**.
Output Paper Device	Copy Tray 3-bin Sorter Finisher	Allows you to specify which output bin you want to use when an optional output device is installed. The options contained in the list are based on the optional output devices that are available on the machine. The default value is **Copy Tray**.
Resolution	600 dpi 400 dpi 300 dpi	Allows you to specify the output resolution for the printer. The default value is **400 dpi**.
Staple	Off 1Portrait 1Landscape 2 Portrait 2 Landscape	Allows you to specify whether you want to use the stapling option, and if so, how many staples you want and where you want to staple the printed output. Off species that you do not want stapling. One Portrait specifies that you want one staple placed at the top left corner of the portrait page. One Landscape specifies that you want one staple placed at the top left corner of the landscape page.

Field	Parameter	Description
Staple (cont.)		Two Portrait specifies that you want two staples on the portrait page. The staples are placed along the left side of the page when long edge feed is used. The staples are placed along the top of the page when short edge feed is used. Two Landscape specifies that you want two staples on the landscape page. The staples are placed along the top of the page when long edge feed is used. The staples are placed along the left side of the page when short edge feed is used. This feature is available only when the optional stapler is installed. The default value is **Off**.
Auto Tray Switching	On Off	Allows you to specify whether you want to use Auto Tray Switching. When you enable Tray Switching, the printer switches to an alternate paper tray when the current tray is empty. The default value is **On**.
Printer Output Tray	1st Output Bin 2nd Output Bin 3rd Output Bin	Allows you to specify which bin you want to use. The default value is 2nd output **Bin**.
Edge Smoothing	On Off	Allows you to specify whether you want to use Edge Smoothing. The default value is **On**.
Input Paper Device	None 1000-sheet Tray Unit 1500-sheet Tray Unit	Allows you to specify that you want to use an optional input tray when one is installed. The default value is **None**.

Fonts Tab

The Fonts tab contains the **[Font Downloader]** button you use to access the Font Installer window, which you use to install fonts when necessary.

The following lists the descriptions and parameters for the fields contained on the Fonts tab.

Field	Parameter	Description
Send TrueType Fonts to This Printer as:	Type 1 Type 3 Type 42 Don't Send	Allows you to specify how your printer uses TrueType fonts. You can override this setting individually for each font using the "TrueType Substitutions for All Printers" list. Type 1 sends the TrueType fonts to the printer as outline PostScript fonts. Type 3 sends the TrueType fonts to the printer as bitmapped PostScript fonts. Type 42 packages the TrueType fonts for the printer. Don't Send uses the TrueType fonts that are resident or supplied. The default value is **Type 1**.
Substitute PostScript Fonts for TrueType Fonts on This Printer.	On Off	Allows you to specify whether you want to substitute PostScript fonts for TrueType fonts. When you enable this option, your documents print faster. However, some printed fonts may be slightly different than the screen fonts. The default value is **On**.
TrueType Substitutions for All Printers	List of TrueType fonts and the available substitutions	Allows you to specify the Post Script font you want to use in place of each TrueType font included in the list.

PostScript Tab

The following lists the descriptions and parameters for the fields contained on the PostScript tab.

Field	Parameter	Description
Performance Options	Use PostScript Level 2 Features Send Data in Binary	Allows you to specify the manner in which your system sends document data to your printer. Use the Enabling the Use PostScript Level 2 Features option to use the available PostScript Level I features when sending the print data. Use the Send Data in Binary option to send binary data to your printer. To use this option, your printer must be set up to receive binary data. The default value is **Use PostScript Level 2 Features**.
PostScript Timeout Values	Job Timeout - Seconds Wait Timeout - Seconds	Allows you to specify the timeout information in seconds. When you specify zero, the job is not canceled. Job Timeout indicates how long a print job can run before it is canceled. Wait Timeout indicates how long the printer will wait for the print data before the print job is canceled The default values are **Job timeout - 0** **Wait timeout -120** **Note:** Do not specify zero when you are using a networked printer.
Margins	Default None	Allows you to add or remove margins from your PostScript output. The default value is **Default**.

Field	Parameter	Description
Protocol Options	Default - Serial/Parallel None (Apple Talk)	Allows you to specify your PostScript communications setting. When Default - Serial/ Parallel is enabled, you can end your print jobs using the Ctrl+D command. The default value is **Default - Serial/Parallel**.
PostScript Performance	Optimize for Speed Optimize for Portability	Allows you to specify the printer performance level that you want to use. When you enable Optimize for Speed, your print jobs complete in a faster time period, but many not print successfully when your printer has a limited amount of memory. Enable Optimize for Portability creates print jobs that will print on a variety of printers. The default value is **Optimize for Speed**.

Job Control Tab

The Job Control tab also contains the **[Download]** button, which you use to send the PostScript header to the printer. When you perform this task, the PostScript header resides on the printer until the printer is restarted and the Already Downloaded option is automatically enabled.

The following lists the descriptions and parameters for the fields contained on the Job Control tab.

Field	Parameter	Description
Printer Mode	ASCII Mode Binary Mode	Allows you to specify the data format you want to use to communicate with the printer. The default value is **ASCII Mode**.
PostScript Header	Download Each Job Already Downloaded	Allows you to control the manner in which PostScript headers are downloaded. Download Each Job sends a PostScript header with each print job. Already Downloaded indicates that the header is already resident on the printer. When you click the [Download] button, this option is automatically selected. The default value is **Download Each Job**.

Field	Parameter	Description
Send Error Handler With Each Job	On Off	Allows you to specify whether you want to enable PostScript error printing. This option is not available when you enable Optimize for Portability on the PostScript tab. The default value is **Off**.
Do Not Download Fonts	On Off	Allows you to specify that you do not want soft fonts downloaded to the printer. Enable this option only when the soft fonts are already available to your printer. The default value is **Off**. **Note:** This does not affect TrueType fonts.

Watermark Tab

The following lists the descriptions and parameters for the fields contained on the Watermark tab. The Watermark tab also contains the **[Edit]** button you use to make changes to the selected watermark, the **[Add]** button you use to add a watermark to your list, and the **[Delete]** button you use to delete the selected watermark.

Field	Parameter	Description
Select a Watermark	List box containing the currently available Watermarks	Allows you to select the Watermark you want to use, delete, or edit. The watermark you select displays in the area located on the right of the screen.

Watermark Window

You access the Watermark window when you select a watermark from the Watermark tab and click the **[Edit]** button, or when you click the **[Add]** button from the Watermark tab. You use this window to specify the information for the watermark you are creating or modifying. The following lists the descriptions and parameters for the fields contained on the Watermark window.

Field	Parameter	Description
Watermark Text	Text Font Size Style Print In Foreground Print Outline Only	Allows you to create or edit the watermark text, font, size, and style. Also allows you to specify the mode you want to use when printing a watermark.
Angle	-90 to 90 degrees	Allows you to rotate the Watermark from -90 to +90 degrees.
Position	Automatically Center Watermark Position Relative to Center (x, y)	Allows you to adjust the position of a watermark. on the page.

WINDOWS 95

This section contains information on the PostScript print parameters and options available for your Windows 95 system.

Properties Window

In general, you access the Properties window by selecting Print from the File menu and clicking the **[Properties]** button, or by selecting Print Setup from the File menu when available from your application. You can also access the Properties window by clicking the **[Start]** button and selecting Printers from the Settings submenu. A list of icons representing the printers available to you displays. Double-click on the icon that represents the printer you want to use. The Printers window displays with a list of the currently queued print jobs displays. Select Properties from the Printer menu available on the Printers window. The Properties window displays.

Depending on the manner in which you access it, the Properties window contains from five to eight tabs. You use these tabs to specify the parameters and options you want to use for your print jobs.

General Tab

The General tab displays only when you access the Properties window using the "Printers" selection from the Settings submenu. This tab contains general description information about the printer and allows you to print a test page. Refer to the documentation provided with your operating system for further information on this tab.

Details Tab

The Details tab displays only when you access the Properties window using the "Printers" selection from the Setting. This tab contains setup information about the printer driver and the printer ports. Refer to the documentation provided with your operating system for further information on this tab.

Paper Tab

The Paper tab contains the **[More Options]** button you use to access the More Paper Options window, which allows you to specify additional paper parameters. The Paper tab also contains the **[Unprintable Area]** button you use to access the Unprintable Area window, which allows you to specify page margin parameters.

The following lists the descriptions and parameters for the fields contained on the Paper tab.

Field	Parameter	Description
Paper Size	8.5 x 11 in 8.5 x 14 in 11 x 17 in 7.5 x 10.5 in 5.5 x 8.5 in A3 (297 x 420 mm) A4 (210 x 297 mm) A5 (148 x 210 mm) A6 (105 x 148 mm) B4 (257 x 364 mm) B5 (182 x 257 mm) 8.25 x 13 in 8.5 x 13 in 8 x 13 in	Allows you to specify the output paper size you want to use. The default value for North America is **8.5 x 11 in**. The default value for Europe is **A4**.
Layout	1 up 2 up 4 up 6 up 9 up 16 up	Allows you to specify the number of multiple pages you want to print on a single sheet of paper. When you want to print multiple pages, you can specify that you want to print a border around the page by checking the Print Page Border checkbox. The default value is **1 up**.

Field	Parameter	Description
Orientation	Portrait Landscape Lotate Landscape	Allows you to specify the orientation of the printed output. The default value is **Portrait**.
Paper Source	Auto Tray Select Tray 1 Tray 2 Tray 3 Tray 4 Bypass Tray Large Capacity Tray	Allows you to specify the input paper tray you want to use. The default value is **Auto Tray Select**.
Copies	1 to 999	Allows you to specify the number of copies you want to print. You can enter this parameter using your keyboard or using the incremental spin buttons. The default value is **1**.

More Paper Options Window

To access the More Paper Options window, click on the **[More Options]** button available on the Paper tab. The following lists the descriptions and parameters for the fields contained on the More Paper Options window.

Field	Parameter	Description
Printing on both sides (duplex printing)	None Flip on long side Flip on short edge	Allows you to specify that you want the output printed in duplex format. Off specifies that you do not want to use duplex printing. Flip on long side specifies that, when printing in Portrait mode, you want to bind your output along the left edge of the paper, like a book. In Landscape mode, this setting produces output that you can bind along the top edge of the paper, like a calendar. Flip on short edge specifies that, when printing in Portrait mode, you want to bind your output along the top edge of the paper, like a calendar. In Landscape mode, this setting produces output that you can bind along the left edge of the paper, like a book. The default value is **None**.
Printer Output Tray	1st Output Bin 2nd Output Bin 3rd Output Bin	Allows you to specify which output bin you want to use when an optional output device is installed. The options contained in the list are based on the optional output devices that are available on the machine. The default value is **1st Ouput Bin**.

Unprintable Area Window

To access the Unprintable Area window, click on the **[Unprintable Area]** button available on the Paper tab. The following lists the descriptions and parameters for the fields contained on the Unprintable Area window.

Field	Parameter	Description
Units	Inches Millimeters	Allows you to specify the units of measure you want to use for the margin settings. The default value is **Inches** (U.S.).
Top	0.28 to 5.50 inches 7.1 to 139.7 mm	Allows you to specify the top margin for the printed image. The default value is **0.28 inches (7.1 mm)**.
Bottom	0.18 to 5.50 inches 4.6 to 139.7 mm	Allows you to specify the bottom margin for the printed image. The default value is **0.18 inches (4.6 mm)**.
Left	0.18 to 4.250 inches 4.6 to 108 mm	Allows you to specify the left margin for the printed image. The default value is **0.18 inches (4.6 mm)**.
Right	0.28 to 5.50 inches 4.6 to 108 mm	Allows you to specify the right margin for the printed image. The default value is **0.18 inches (4.6 mm)**.

Graphics Tab

The following lists the descriptions and parameters for the fields contained on the Graphics tab.

Field	Parameter	Description
Resolution	600 dpi 400 dpi 300 dpi	Allows you to specify the output resolution for the printer. The default value is **400 dpi**.
Halftoning	Use printer settings Use settings below Screen frequency Screen angle	Allows you to select the Halftone setting you want to use. When you select Use settings below, you enter the screen frequency and angle settings you want to use to override the default halftone settings for the printer. The default value is **Use printer settings**.
Special	Print as a negative image Print as a mirror image	Allows you to manipulate the printed image. Print as a negative image allows you to specify whether you want to print the job as a negative. Areas that appear black on the screen print as white, and areas that appear white on the screen print as black. Print as a mirror image allows you to specify whether you want to print the document as a mirror image of the screen.
Scaling	25 to 400 percent	Allows you to specify the percent of scaling to enlarge or reduce the printed image. The default value is **100%**.

Fonts Tab

The following lists the descriptions and parameters for the fields contained on the Fonts tab. The Fonts tab contains the **[Edit the Table]** button you use to access the Font Substitution Table window, which allows you to specify font substitution criteria. The Fonts tab also contains the **[Send Fonts As]** button you use to access the Send Fonts As window, which allows you to further specify your font criteria.

Field	Parameter	Description
Send TrueType fonts to the printer according to the font Substitution Table.	On Off	Allows you to specify whether you want to replace TrueType fonts with built-in printer fonts. You can specify this information for each font using the font substitution table. You access the font substitution table by clicking the **[Edit the Table]** button. The default value is **On**.
Always use built-in printer fonts instead of TrueType fonts.	On Off	Allows you to specify whether you want to substitute PostScript fonts for TrueType fonts. When you enable this option, your documents print faster. However, some printed fonts may be slightly different than the screen fonts. The default value is **Off**.
Always use TrueType fonts.	On Off	Allows you to specify whether you always want to use TrueType fonts. When you enable this option, your documents print more slowly. However, the printed fonts look exactly the same as the screen fonts. The default value is **Off**.

Font Substitution Table Window

To access the Font Substitution Table window, click on the **[Edit the Table]** button available on the Fonts tab. The following lists the descriptions and parameters for the fields contained on the Font Substitution Table window.

Field	Parameter	Description
For the TrueType font:	Lists the available TrueType fonts you can replace with PostScript fonts.	Allows you to select the TrueType fonts you want to replace.
Printer font for:	Lists the PostScript fonts you can use in place of the TrueType font you selected.	Allows you to specify the PostScript font you want to use for the substitution.

Send Fonts As Window

To access the Send Fonts As window, click on the **[Send Font As]** button available on the Fonts tab. The following lists the descriptions and parameters for the fields contained on the Send Fonts As window.

Field	Parameter	Description
Send TrueType fonts as:	Outlines Bitmaps Type 42 Don't Send	Allows you to specify how your printer uses TrueType fonts. You can override this setting individually for each font using the Font Substitution window. Outlines sends the TrueType fonts to the printer as outline PostScript fonts. Bitmaps sends the TrueType fonts to the printer as bitmapped PostScript fonts. Type 42 packages the TrueType fonts for the printer. Don't Send uses the TrueType fonts that are resident or supplied. The default value is **Outlines**.
Threshold to switch between downloading bitmap or outline fonts, measured in pixels (at the current resolution).	1 to 99.99	Allows you to specify the font size, in pixels, at which the PostScript driver will switch from a TrueType font to a bitmap fonts. The default value is **99.99**.

Field	Parameter	Description
Favor system TrueType fonts over printer fonts that have the same name.	On Off	Allows you to specify which fonts have priority. When you enable this option, your documents print faster. However, some printed fonts may look slightly different than the screen fonts. The default value is **Off**.
PostScript fonts	In Native Format Don't Send	Allows you to specify whether you want soft fonts downloaded to the printer. Select Don't Send only when the soft fonts are already available to your printer. The default value is **In Native Format**. **Note:** This does not affect your TrueType fonts.

Device Options

Tab The following lists the descriptions and parameters for the fields contained on the Device Options tab. To specify the printer feature parameters you want, select the feature and select the option you want to use for the feature from the Change Setting for list box. The items that display depend on the options you have available on the machine.

Field	Parameter	Description
Available printer memory (in KB)	0 to 25600	Allows you to specify how much of the printer memory is available to spool print strings.

Field	Parameter	Description
Auto Tray Switching	On Off	Allows you to specify whether you want to use Auto Tray Switching. When you enable Tray Switching, the printer switches to an alternate paper tray when the current tray is empty. The default value is **On**.
Job Separation	On Off	Allows you to specify whether you want to use the job separation feature provided by the optional finisher. The separation is implemented either as a mechanical offset, or with a sheet of paper, depending on the type of trays installed on the machine. When a mechanical offset is used, the finisher activates a jogger mechanism that moves the shift tray slightly to the right or to the left for each job. This makes it easy to determine where the end of a set or job occurs. Job separation is especially useful for separating collated jobs. This option is available only when the optional finisher is installed. The default value is **Off**.

Field	Parameter	Description
Staple	Off 1 Portrait 1 Landscape 2 Portrait 2 Landscape	Allows you to specify whether you want to use the stapling option, and if so, how many staples you want and where you want to staple the printed output. Off species that you do not want stapling. One Portrait specifies that you want one staple placed at the top left corner of the portrait page. One Landscape specifies that you want one staple placed at the top left corner of the landscape page. Two Portrait specifies that you want two staples on the portrait page. The staples are placed along the left side of the page when long edge feed is used. The staples are placed along the top of the page when short edge feed is used. Two Landscape specifies that you want two staples on the landscape page. The staples are placed along the top of the page when long edge feed is used. The staples are placed along the left side of the page when short edge feed is used. This feature is available only when the optional stapler is installed. The default value is **Off**.
Output Paper Device	Copy Tray 3-bin Sorter Finisher	Allows you to specify which output bin you want to use when an optional output device is installed. The options contained in the list are based on the optional output devices that are available on the machine. The default value is **Copy Tray**.
Edge Smoothing	On Off	Allows you to specify whether you want to use Edge Smoothing. The default value is **On**.
Input Paper Device	None 1000-sheet Tray Unit 1500-sheet Tray Unit	Allows you to specify that you want to use an optional input tray when one is installed. The default value is **None**.

PostScript Tab

The following lists the descriptions and parameters for the fields contained on the PostScript tab. The PostScript tab contains the **[Send Header Now]** button, which you use to send the PostScript header to the printer. When you perform this task, the PostScript header resides on the printer until the printer is restarted and the Assume header is downloaded and retained option is automatically enabled. The PostScript tab also contains **[Advanced]** button you use to access the Advanced PostScript Options window.

Field	Parameter	Description
PostScript output format:	PostScript (optimize for speed) PostScript (optimize for portability - ADSC) Encapsulated PostScript (EPS) Archive format PJL archive format	Allows you to specify the PostScript output mode you want to use. Depending on the mode you specify, you can increase speed, allow portability, and enable compatibility with Encapsulated PostScript (EPS), Archive format, and PJL archive format. The default value is **PostScript (optimize for speed)**.
PostScript header	Download header with each print job Assume header is downloaded and retained	Allows you to control the manner in which PostScript headers are downloaded. Download header with each print job sends a PostScript header with each print job. Assume header is downloaded and retained indicates that the header is already resident on the printer. When you click the **[Send Header Now]** button, this option is automatically selected. The default value is **Download header with each print job**.
Print PostScript error information	On Off	Allows you to specify whether you want to enable PostScript error printing. This option is not available when you enable Encapsulated PostScript. The default value is **On**.

Field	Parameter	Description
PostScript timeout values	Job timeout Wait timeout	Allows you to specify the timeout information in seconds. When you specify zero, the job is not canceled. Job Timeout indicates how long a print job can run before it is canceled. Wait Timeout indicates how long the printer will wait for the print data before the print job is canceled The default values are **Job timeout - 0** **Wait timeout -120** **Note:** Do not specify zero when you are using a networked printer.

Advanced PostScript Options Window

To access the Advanced PostScript Options window, click on the **[Advanced]** button available on the PostScript tab. The parameter settings contained on this window were specified for optimal printer performance. You should not change these setting unless you have a specific reason for the change.

The following lists the descriptions and parameters for the fields contained on the Advanced PostScript Options window.

Field	Parameter	Description
PostScript language level	Use PostScript Level 1 features Use PostScript Level 2 features	Allows you to specify the PostScript language level you want to use with your printer. The default value is **Use PostScript Level 2 features**.
Bitmap compression	Compress bitmap images No bitmap compression	Allows you to specify the manner in which bitmap images are sent to the printer. Compressing the images uses less printer memory and prints faster. The default value is **Compress bitmap images**.

Field	Parameter	Description
Data format	ASCII data Tagged binary communication protocol Pure binary data Send CTRL+D before job Send CTRL+D after job	Allows you to specify the data format you use to communicate with the printer. Also allows you to specify when to send the Ctrl+D command to the printer. The default value is **ASCII data and Send CTRL+D after job**.
Display alert for applications incompatible with driver features.	On Off	Allows you to specify whether you want to print an alert when an application is unable to display printer alert information on the screen. The default value is **Off**.

Watermark Tab

The following lists the descriptions and parameters for the fields contained on the Watermark tab. The Watermark tab also contains the **[Edit]** button you use to make changes to the selected watermark, the **[Add]** button you use to add a watermark to your list, and the **[Delete]** button you use to delete the selected watermark.

Field	Parameter	Description
Select a Watermark	List box containing the currently available Watermarks	Allows you to select the Watermark you want to use, delete, or edit. The watermark you select displays in the area located on the right of the screen.

Watermark Window

You access the Watermark window when you select a watermark from the Watermark tab and click the **[Edit]** button, or when you click the **[Add]** button from the Watermark tab. You use this window to specify the information for the watermark you are creating or modifying. The following lists the descriptions and parameters for the fields contained on the Watermark window.

Field	Parameter	Description
Watermark Text	Text Font Size Style Print In Foreground Print Outline Only	Allows you to create or edit the watermark text, font, size, and style. Also allows you to specify the mode you want to use when printing a watermark.
Angle	-90 to 90 degrees	Allows you to rotate the Watermark from -90 to +90 degrees.
Position	Automatically Center Watermark Position Relative to Center (x, y)	Allows you to adjust the position of a watermark. on the page.

MACINTOSH POSTSCRIPT PRINTER DRIVER

The Macintosh PostScript printer driver allows the printer to support Adobe PostScript Level II. The PostScript option allows you to download PostScript Type 1 fonts, and includes a rasterizer that allows you to download TrueType fonts as soft fonts. This section contains information using the PostScript printer driver for Apple Macintosh.

Note: The PCL 5e drivers are not available for the Macintosh. Using the machine with a Macintosh requires the PostScript option

Installable Options Window

To access the Installable Options window, select the printer from the list and click the **[Setup]** button. A list of PostScript Printer Description (PPD) files displays. Make sure the correct PPD file is highlighted and verify that the correct printer name displays at the bottom of the window. Click the **[Select]** button to access the Installable Options window.

You use the Installable Options window to specify the availability of printer accessories and memory. The following lists the descriptions and parameters for the fields contained on the Installable Options window.

Field	Parameter	Description
Total Printer Memory	8, 16, 24, 32, 40 MB or more	Allows you to specify how much of the printer memory is available. The default value is **8 MB**.
Input Paper Device	None 1000-sheet Tray Unit 1500-sheet Tray Unit	Allows you to specify that you want to use an optional input tray when one is installed. The default value is **None**.
Output Paper Device	Copy Tray Finisher 3-bin sorter	Allows you to specify which output bin you want to use when an optional output device is installed. The options contained in the list are based on the optional output devices that are available on the machine. The default value is **Copy Tray**.

Page Setup Window

To access the Page Setup window, select Page Setup from the File menu. You use the Page Setup window to specify printing features for the current print job.

The **[Options]** button available on this window accesses the Printer Options window. The **[Print]** button access the Print Options window. The **[Margins]** button accesses the Margins window, which you use to set the page margins for the print job.

The following lists the descriptions and parameters for the fields contained on the Page Setup window.

Field	Parameter	Description
Paper	8.5 x 11 in 8.5 x 14 in 11 x 17 in 5.5 x 8.5 in A3 (297x420 mm) A4 (210x297 mm) A5 (148x210 mm) A6 (105x148 mm) B4 (257x364 mm) B5 (182x257 mm) 7.5 x 10.5 in 8 x 13 in 8.5 x 13 in 8.25 x 13 in	Allows you to select a paper size for the current print job. The default value for North America is **8.5 x 11 in**. The default value for Europe is **A4**.
Layout	1 up 2 up 4 up 6 up 9 up 16 up	Allows you to specify the number of multiple pages you want to print on a single sheet of paper. The default value is **1 up**. **Note:** An illustration of the layout displays on the left side of the window.

Field	Parameter	Description
Reduce or Enlarge	25 to 400 percent	Allows you to use your keyboard to specify the percentage by which you want to shrink or enlarge the printed image. The default value is **100 percent**.
Orientation	Portrait Landscape Rotate Landscape	Allows you to select the icon that corresponds to page orientation you want to use. The default value is **Portrait**.

Printer Options Window

To access the Printer Options window, from the Page Setup window, click the **[Options]** button. You use the Printer Options window to specify text and graphics attributes for the print job. The following lists the descriptions and parameters for the fields contained on the Printer Options window.

Field	Parameter	Description
Flip Horizontal	On Off	Allows you to specify whether you want to print the document as a mirror image of the screen. The default value is **Off**.
Flip Vertical	On Off	Allows you to specify whether you want to print the document upside down. The default value is **Off**.
Invert Image	On Off	Allows you to specify whether you want to print the job as a negative. Areas that appear black on the screen print as white, and areas that appear white on the screen print as black. The default value is **Off**.
Substitute Fonts	On Off	Allows you to specify whether you want the printer to substitute PostScript printer fonts for Macintosh screen fonts. When you select this option, your job prints faster and uses less memory. The default value is **On**.
Smooth Graphics	On Off	Allows you to specify whether you want the printer to rasterize bitmap image output to improve the appearance of graphics. The default value is **On**.

Field	Parameter	Description
Precision Bitmap Alignment	On Off	Allows you to specify whether you want to print bitmap graphics more precisely. Select this setting when you use a low-resolution monitor The default value is **Off**.
Unlimited Downloadable Fonts in a Document	On Off	Allows you to specify whether you want the printer to print without substituting printer fonts for Macintosh screen fonts. When you select this option, your print job may print more slowly. However, the appearance of your output matches the screen more closely. The default value is **Off**.
Larger Print Area	On Off	Allows you to specify whether you want to use a larger print area. The default value is **Off**.

Print Options Window

To access the Print Options window, from the Page Setup window, click the **[Print]** button. You use the Print Options window to specify printer attributes. The following lists the descriptions and parameters for the fields contained on the Print Options window.

Field	Parameter	Description
Cover Page	None Before document After document	Allows you to specify the manner in which you want to print cover pages. Cover pages can be useful for separating individual documents in large print runs. None specifies that you do not want to print a cover page. Before document specifies that you want to print a cover page at the beginning of each document. After document specifies that you want to print a cover page at the end of each document. The default value is **None**.

Field	Parameter	Description
Print	Black and White Color/Grayscale ColorSync Color Matching PostScript Color Matching	Allows you to specify the manner in which you want to print graphics. Black and White specifies that you want to print in black and white only. Color/Grayscale specifies that you want the printer to render color images and text in shades of gray. Use this setting when you want to print documents that contain color or grayscale images, such as photographs. ColorSync Color Matching specifies that you want to use color conversion on the Macintosh printer. When you select this option, you must specify a Printer Profile value. This option is available only when the ColorSync software is installed. You must use this option when you want color conversions and have only a PostScript Level 1 printer. Postscript Color Matching specifies that you want to use color conversion on the Macintosh printer. When you select this option, you must specify a Printer Profile value. This option is available only when the ColorSync software is installed. Use this option when your printer is not color calibrated and is a PostScript Level 2 printer. The default value is **Black and White**.
Printer Profile		Allows you to select a printer profile for your color printer. When you select **ColorSync Color Matching** or **PostScript Color Matching** for the Print option, you must select a Printer Profile value. The default value is **Printer's Default**.

Field	Parameter	Description
PostScript error handling	No special reporting Summarize on screen Print detailed report	Allows you to specify the manner in which you want the printer to notify you when a PostScript error occurs. When an error occurs, the printer completes the current job and performs a soft reset. However, when a fatal error occurs (when the printer stops printing), you must turn the power to the printer off and back on. No special reporting specifies that you do not want the printer to notify you of a PostScript error. Summarize on screen specifies that you want the printer to notify you of a PostScript error by displaying an error message on your monitor. Print detailed report specifies that you want the printer to notify you of a PostScript error by printing a PostScript error report. The default value is **No special reporting**.
Auto Tray Switch	On Off	Allows you to specify whether you want the printer to automatically switch to an empty output tray when the currently selected output tray is full. The default value is **On**.
Duplex	Off Long Edge Binding Short Edge Binding	Allows you to specify that you want the output printed in duplex format. Off specifies that you do not want to use duplex printing. Long Edge Binding specifies that, when printing in Portrait mode, you want to bind your output along the left edge of the paper, like a book. In Landscape mode, this setting produces output that you can bind along the top edge of the paper, like a calendar. Short Edge Binding specifies that, when printing in Portrait mode, you want to bind your output along the top edge of the paper, like a calendar. In Landscape mode, this setting produces output that you can bind along the left edge of the paper, like a book. The default value is **Off**.

Field	Parameter	Description
Job Separation	On Off	Allows you to specify whether you want to use the job separation feature provided by the optional finisher. The separation is implemented either as a mechanical offset, or with a sheet of paper, depending on the type of trays installed on the machine. When a mechanical offset is used, the finisher activates a jogger mechanism that moves the shift tray slightly to the right or to the left for each job. This makes it easy to determine where the end of a set or job occurs. Job separation is especially useful for separating collated jobs. This option is available only when the optional finisher is installed. The default value is **Off**.
Staple	Off One Portrait One Landscape Two Portrait Two Landscape	Allows you to specify whether you want to use the stapling option, and if so, where you want to staple the printed output. None species that you do not want stapling. One Portrait specifies that you want one staple placed at the top left corner of the portrait page. One Landscape specifies that you want one staple placed at the top left corner of the landscape page. Two Portrait specifies that you want two staples on the portrait page. The staples are placed along the left side of the page when long edge feed is used. The staples are placed along the top of the page when short edge feed is used. Two Landscape specifies that you want two staples on the landscape page. The staples are placed along the top of the page when long edge feed is used. The staples are placed along the left side of the page when short edge feed is used. This feature is available only when the optional stapler is installed. The default value is **Off**.
Print Output Tray	1st Output Bin 2nd Output Bin 3rd Output Bin	Allows you to specify an output tray. The default value is **1st Output Bin**.

Field	Parameter	Description
Resolution	600 dpi 400 dpi 300 dpi.	Allows you to specify the printer resolution in dots per inch (dpi) for PostScript output. The default value is **400 dpi**.
Edge Smoothing	On Off	Allows you to specify that you want to enhance print quality using edge smoothing. This feature reduces ragged edges, providing printed output with smooth curved and diagonal lines. The default value is **On**.

Printer Window

To access the Printer window, select Print from the File menu. You use the Printer window to specify printing features for the current job. The **[Options]** button available on this window accesses the Printer Options window. The following lists the descriptions and parameters for the fields contained on the Print window.

Field	Parameter	Description
Copies	1 to 999	Allows you to specify the number of copies you want to print. The default value is **1**.
Pages	All From/To	Allows you to specify the portion of the document you want to print. All specifies that you want to print the entire document. From/To allows you to enter the beginning and ending page numbers to specify the portion of the document you want to print. The default value is **All**.
Paper Source	All First page from Remaining from	Allows you to specify the manner in which you want the printer to select input trays for the print job. All - specifies that you want to use a single paper source for the entire document. First page specifies the paper source you want to use for the first page of the document. This option is useful when you want to print a document with a cover page, such as a report, or a business letter using letterhead for the first page only. Remaining from specifies the paper source you want to use for the remaining pages of the document. This option is enabled only when you select First page from. The default value is **All**.
Destination	Printer File	Allows you to specify the output destination for the print job. The default value is **Printer**.

4. TROUBLESHOOTING

OVERVIEW

This chapter provides information that may be helpful when print quality problems, clearing problems and error messages occur while you are using your printer.

When an error requiring operator intervention occurs on the machine, the Error Suspend screen displays on the control panel and the machine is set to Offline mode. You must use the Reset and Continue buttons available on the Error Suspend screen to correct the error and continue using the machine.

When you specify On as the Auto Continue setting on the Configuration menu and an error occurs, the Error Suspend screen displays and the machine is set to Offline mode. When no operator intervention occurs for the amount of time specified for the Auto Continue timeout setting (the default is 30 seconds), the machine is set back to Online mode as though the Continue button were pressed and the print jobs resume.

When a print job requires the use of the manual tray, the "Please open the Bypass Tray" message displays. When the bypass tray is not opened within the time specified (the default is 300 seconds, which is five minutes), the print job is cancelled and the next job begins printing.

PRINT QUALITY PROBLEMS

This section contains information on the print quality problems that may occur while using the printer, as well as the actions you can take to solve the problems. Table -1 lists the print quality problems and provides possible solutions.

Table -1Print quality problems

Problem	Description	Action:
Background Scatter	Toner is scattered on the page. This problem is usually isolated to a specific area on the page.	❒ Make sure you are using paper or transparencies designed for use with laser printers and copy machines (refer to the "Specifications" chapter in this manual for further information). ❒ When the back of a printed page has background scatter, check for toner buildup on the rollers or separation pad inside of the printer.
Black Page	The page prints entirely in black.	❒ Check that the toner cartridge is installed correctly. ❒ Check for damage to the toner cartridge or for a defective toner cartridge.
Character Voids	White areas are printing where characters should print in solid black.	❒ Make sure you are using paper or transparencies designed for use with laser printers. ❒ Make sure that you are printing on the correct side of the paper.
Dropouts	Characters are printing incompletely or not at all.	❒ When this occurs on one page only, the sheet of paper may be defective. ❒ Adjust the print density slide. ❒ Make sure that you are using paper or transparencies designed for use with laser printers.
Entire document does not print	You sent a print job, but the entire job did not print.	❒ Check the configuration to make sure that it is set to print the entire job and not specific pages.

Problem	Description	Action:
Faded Area	A block of faded vertical white lines prints or an area of the printed matter is faded.	❒ Check for low toner. ❒ Check that the paper surface is suitable for the printer. Avoid using shiny, highly textured, coated, or erasable typewriter paper.
Fragments or confusing data	Fragments or data, or data unrelated to your print job is printing.	❒ Check that you are using the correct printer driver. ❒ Check that you have the correct interface cable.
Horizontal Lines	Horizontal black streaks or smears print on the page.	❒ Check for damage to the toner cartridge. ❒ Check that the toner cartridge is installed correctly.
Multiple Blank Pages	All pages are entirely white.	❒ Check whether you have completely removed the sealing tape from the toner cartridge. ❒ Check for an empty toner cartridge. ❒ If none of the above are the cause of the problem you may be experiencing data loss. If this is the case, your printer may need to be serviced.
No printing occurs	You sent a print job, but the printer is not producing a printed copy.	❒ If this is the first time you have used the printer, make sure that you have correctly removed all of the packaging materials from the printer. ❒ If the printer has worked previously, check that the interface cables are secure.
Printed image is too light	The printer output is too light.	❒ Check that the toner cartridge is positioned correctly. Verify whether the toner is low. ❒ Check that the printing drum is positioned correctly.

Problem	Description	Action:
Repeating Patterns	Marks or shadows of characters print in a repeated pattern on each page.	❒ Make sure that the paper path is not dirty. ❒ Make sure that you are using paper or transparencies designed for use with laser printers and copy machines. ❒ Check for damage to the toner cartridge. The toner cartridge can become damaged from overexposure to bright lights.
Single Blank Page	A page is entirely white.	❒ Make sure that the page length setting is correct for the paper size. ❒ Verify whether the network sharing device is generating a blank separator page. ❒ Check whether two or more pages fed into the printer at the same time. ❒ Verify whether an extra page command is being sent from your software application. This may be caused by a forced page break directly above or below a natural page break. ❒ If none of the above are the cause of the problem you may be experiencing data loss. If this is the case, your printer may need to be serviced.
Stains	Small, black, round dots or inconsistent stains print on the page.	❒ Make sure that you are using paper that is manufactured for use with laser printers and copy machines. ❒ Make sure that you are printing on the correct side of the paper. ❒ Check for buildup of toner on the printer rollers. ❒ Check for damage to the toner cartridge.
Vertical Lines	Vertical black streaks or smears print on the page.	❒ Check for damage to the toner cartridge.

PRINTER PROBLEMS

This section contains information on the paper jam and printer problems that may occur while using the printer, as well as the actions you can take to solve the problems. Refer to the *Copier Reference Guide* for further information on basic maintenance tasks (for example, adding toner, paper, and staples).

Jam Recovery

When a paper jam occurs while printing is in progress and the jam recovery feature is set to "On," the affected pages are retrieved from the hard disk and are reprinted. Jam recovery is always on for those printing modes that use the hard disk drive to temporarily sort image data. You can use the "JAMRECOVERY" selection on the Configuration Menu to determine whether jam recovery is on.

When the "JAMRECOVERY" selection on the Configuration Menu is set to "On," the data for a page is retained on the hard drive until the page exits the printer. This guarantees that all paper jams are recoverable. When the "JAMRECOVERY" selection on the Configuration Menu is set to "Off," the job may still recover from a jam. This recovery depends on where the jam occurred and the number of pages that are being maintained by the printer.

Since more print data is retained when the "JAMRECOVERY" selection is set to "On," printer performance may be slower than for print jobs not using the hard disk drive.

Solving Printer Problems

This section provides solutions to some of the printer problems you may encounter while using your printer. Table -2 lists the basic problems that may occur with your printer and the actions you can take to correct the problems.

Table -2 Basic problem resolution

Condition	Action
The printer does not activate when the main switch is turned on.	Make sure that the power cord is properly plugged in to an appropriate power outlet.
The printer has turned off.	Turn on the main switch.
The printer is printing fragments or confusing data.	Verify that you have the correct interface cable.
Printed image is too light.	Verify that the toner cartridge is positioned correctly. Verify whether the toner is low.
Paper runs out.	Add paper.
Stapling does not occur.	Verify whether there are staples jammed in the stapler. If so, remove the jammed staples. Check if the staple cartridge is empty. If so, load a new staple cartridge (after loading a new staple cartridge, staples may not be ejected the first few times you use the stapler). Turn over the paper in the feeder tray. If this does not correct the problem, change to a paper stock with less curl.

Table -3 lists the printer conditions that may occur, and the action you can take to correct the conditions.

Table -3 Printer condition resolution

Condition	Action
Disk Error	The printer suspends operation and waits for user confirmation when a disk error is detected. When you confirm the disk error message, the disk subsystem is disabled and the printer starts again without the disk after you turn the power off and back on. When this occurs, any jobs in progress or spooled are lost. **Note:**Even if a disk error occurs, the copier function is available. A flag is set in NVRAM to indicate that a disk error was detected. When a power on occurs with this flag set, the printer operates without disk services. You must perform a SYSTEM RESET to clear this flag.
Frequent misfeeds	Verify that the size and weight of the paper you are using meets the paper specifications for the printer. Verify whether the paper is folded, wrinkled, damp, or curled. Verify that the paper is correctly placed in the paper tray. Check for any pieces of misfed paper or other foreign objects in the machine. Verify that the page size setting is correct for the paper contained in the feeder tray.
Please open Bypass Tray	The "Please open Bypass tray" message displays when a print job specifying Bypass feed is ready to print and the Bypass tray door is closed. This message is followed by a "No paper. Add size paper to Bypass Tray" message. These messages are repeated when the Bypass tray runs out of paper. When the bypass tray is not opened within a specific time period, the job will be canceled automatically. The time period is called the bypass tray time-out. You can set the manual time-out using the Control Panel menus. To avoid manually fed paper (such as transparencies) from jamming in the duplexer or stapling stack, manual feed print jobs cannot be duplexed or stapled.

Condition	Action
Print Overrun	Reduce the printer resolution and send the print job again. Print overruns do not occur in Pre-image buffer mode. When you add SIMM memory to the printer, a full page buffer of the requested paper size can be utilized, and banding mode is not used.

When you encounter a printer problem and none of the information available in this section solves the problem, contact your Service Representative. Attempting to repair the printer yourself is not covered by the warranty and may cause further damage to the printer. When you contact your Service Representative, make sure to have the following information available:

- ❒ A record of the problem that occurred and the steps you took to eliminate the problem.
- ❒ The name number of the printer.
- ❒ Configuration information for the printer.
- ❒ Information on the printer driver you are using.

ERROR MESSAGES

The ONLINE operation screen of the printer contains three fields and two buttons. The current operation mode displays in the top field. The operating status (which contains the READY status) displays in the next field. The third field contains system messages and is blank during normal operation. When a unique condition occurs, this field displays the error messages.

Table -4 lists the messages that display in this field and provides an indication of what occurred to cause the message, and the action you can take to eliminate the error.

Table -4 Error messages

Message	Description	Action
Add Staples.	The machine is almost out of staples.	Place more staples in the finisher. This message is informational only.
Check tray. Set the <tray> correctly.	The specified tray is open.	Close the specified tray. When the tray is closed, printing resumes automatically.
Controller error. Please call for Service.	A hardware or software problem has occurred with the controller causing a diagnostic error during power on.	Contact your service representative. Although the printing function is not available, you can use the copy function of the machine by pressing the **[COPY]** button.

Message	Description	Action
Controller disk error. Please call for service.	A disk error has occurred during printing. The current print data is lost. A disk error can indicate a number of minor or serious problems. When a disk error first occurs, the disk drive attempts the command again, utilizes extensive error correction capabilities, and remaps transparent bad sectors. The printer disk drive provides an error free media, and no attempt is made to maintain bad sector tables. When all of these internal measures fail, the "Disk Error" message displays.	Turn off the machine and turn it on again. When the error persists, contact your service representative. Although the printing function is not available, you can use the copy function of the machine by pressing the **[COPY]** button.
Cover Open	A door is open on the machine.	Follow the instructions that display and close the specified door.
Duplex tray failure has occurred.	The duplex tray has a mechanical problem.	Call your service representative. Turn the machine off and back on to use the printer for print jobs that do not require the use of the duplex tray.
Engine Fatal Error.	An engine error occurred during printing.	Contact your service representative.

Message	Description	Action
Ethernet failure. Network communication is not available.	An Ethernet error occurred during power up of the machine. The network card was unable to establish communication with the network. **Note:** When a network card is installed in the machine, but is not connected to a network, this error does not display. This error occurs only when the network card does not initialize correclty. The initialization process can take several minutes to complete.	Check the Ethernet settings. Press the **[Continue]** button to use the machine without the network connection.
Faulty disk, or disk not found. Press **[Continue].** The printer restarts with diskless operation.	A disk error (faulty disk, disconnection) has occurred. After turning off the machine off and then back on, the error message will no longer display.	Press the **[Continue]** to restart the printer with diskless operation.
Jam.	A paper jam has occurred.	Follow the instructions that display to remove the paper jam from the machine and press the **[Continue]** button to resume printing. Press the **[Reset]** button to cancel the print job.
Memory overflow.	The print job was too complex to be interpreted by the memory available, causing a memory overflow to occur during printing.	Press the **[Continue]** button to resume printing. Only part of the data will print. Press the **[Reset]** button to cancel the print job. To print the job correctly, add more memory to the machine.

Message	Description	Action
No paper. Add <size> paper to <tray>. **Note:** The <size> parameter specifies both the paper size and the paper direction.	The specified tray has run out of paper of the specified size. **Note:** When tray switching is enabled and the specified paper size is available a secondary input tray, the secondary tray is used and this message does not display.	Fill the specified tray with paper of the specified size. When the tray is full, printing resumes automatically. Press the **[Continue]** button to continue printing without filling the specified tray with paper of the specified size. When tray switching is enabled, paper of an incorrect size is used from a secondary tray. When tray switching is not enabled, the error displays again. Press the **[Reset]** button to cancel the print job. **Note:** When tray switching is not enabled, you can fill the specified tray with an incorrect paper size and press the **[Continue]** button to continue printing.
No paper. Add <size> paper Bypass tray. **Note:** The <size> parameter specifies both the paper size and the paper direction.	The manual feed tray has run out of paper of the specified size.	Fill the manual feed tray with paper of the specified size. When the tray is full, printing resumes automatically. Press the **[Reset]** button to cancel the print job.
Please close the Bypass Tray.	The print job does not require the use of the manual feed tray, but the tray is open.	Close the manual feed tray. Printing does not continue until the manual feed tray is closed.
Please open the Bypass Tray.	The print job requires the use of the manual feed tray.	Open the manual feed tray. When the bypass tray is not opened within the time specified (the default is 300 seconds, which is five minutes), the print job is cancelled and the next job begins printing.

Message	Description	Action
Print overrun error.	A print overrun has occurred on a file that is being printed in banding mode. When the printer is in banding mode, a complex page may not have enough time to image a band while the engine is printing the previous band. The portion of the page after the print overrun occurred will not print.	Press the **[Continue]** button to resume printing. Press the **[Reset]** button to cancel the job. To print the image correctly, add more memory to the machine, or reduce the resolution of the image and resend the job.
Printing is interrupted. Press **[Continue]**, or press **[Reset]** to cancel the current job.	A paper jam has occurred.	Follow the instructions that display to remove the paper jam from the machine and press the **[Continue]** button to continue printing. Press **[Reset]** to cancel the print job. When Jam Recovery is set to Off, the remainder of the print job is cancelled and the next print job prints when the paper jam is removed.
Remove the paper in the duplex tray.	A paper jam has occurred in the duplex tray.	Follow the instructions that display to remove the paper jam from the machine and press the **[Continue]** button to continue printing. Press **[Reset]** to cancel the print job. When Jam Recovery is set to Off, the remainder of the print job is cancelled and the next print job prints when the paper jam is removed.

Message	Description	Action
Remove the paper in the staple unit.	A paper jam has occurred in the stapling area of the finisher.	Follow the instructions that display to remove the paper jam from the machine and press the **[Continue]** button to continue printing. Press **[Reset]** to cancel the print job. When Jam Recovery is set to Off, the remainder of the print job is cancelled and the next print job prints when the paper jam is removed.
Serial communication error. Please set up communication parameters again.	A serial port communication error occurred during printing.	Check the serial port settings. When the serial port problem is fixed, press **[Reset]** to cancel the print job.
Shift tray is full. Remove the copies.	A bin overflow occurred at the 1-bin finisher.	Remove the printed output from the 1-bin finisher. When the output is removed, printing resumes automatically.
The spooling area of the disk is full. Press **[Continue]** to resume printing. The current print job will be split.	The spooling area available on the disk is full. Input spooling is temporarily disabled due to lack of room on the hard disk drive. The spooling area of the disk contains both spooling data and page image data used for reverse order and duplex printing. The spooling area is limited to allow for the space required by page image data.	Press the **[Continue]** button to complete printing of the pages already sent to the disk. The remaining data is then sent to the hard disk and printed in the order received. Therefore, although the entire job prints, the output is not in the order specified. Press the **[Reset]** button to cancel the print job. **Note:** Since the printing of all pages already sent to the disk, including multiple copies, must complete before the remaining data can be sent, the final output is collated incorrectly.

Message	Description	Action
The used toner bottle is full.	The used toner container is full.	Replace the used toner container in the machine. Printing cannot resume until the used toner container is replaced.
The used toner bottle is nearly full.	The used toner container is almost full.	Replace the used toner container in the machine. This message is informational only.
Token Ring failure. Network communication is not available.	A Token Ring error occurred during power up of the machine. The network card was unable to establish communication with the network. **Note:** When a network card is installed in the machine, but is not connected to a network, this error does not display. This error occurs only when the network card does not initialize correclty. The initialization process can take several minutes to complete.	Check the Token Ring settings. Press the **[Continue]** button to use the machine without the network connection.
Toner End.	The toner bottle is empty.	Replace the toner bottle. Printing cannot resume until the toner bottle is replaced.
Toner is almost used up.	The toner bottle is almost empty.	Replace the toner in the machine. This message is informational only.
<tray> failure has occurred. Please call for service.	The specified tray has a mechanical problem.	Call your service representative. Turn the machine off and back on to use the printer for print jobs that do not require the use of this tray.
Warming up. Please wait.	The machine is warming up.	This message is informational only. No action is required.

5. SPECIFICATIONS

PRINTER

This section contains the electrical and hardware specifications for your printer, including information on the feeders, finisher, and options. It also provides information on the output capabilities of the printer.

Electrical and Hardware Specifications

This section contains the electrical and hardware specifications for your printer, including information on the feeders, finisher, and options. Table 5-1 lists the basic printer information and specifications.

Note: *All specifications are subject to change without notice.*

Table 5-1.Basic printer information

Component	Specification
Resolution:	300, 400, 600 dots per inch (dpi)
Paper weight:	Upper tray - 60 to 105 gsm (16 to 28 lb) Bypass tray - 60 to 157 gsm (16 to 42 lb) Large capacity tray - 60 to 128 gsm (16 to 34 lb)
Paper capacity:	Upper tray - 500 sheets or less than 53 mm, 2.08 in Bypass tray - 40 sheets or less than 4 mm, 0.15 in Large capacity tray - 1000 sheets or less than 120 mm, 4.72 in
Optional tray capacity:	A3, 11 by 17 in - 200 sheets B4 or smaller - 500 sheets B5 or smaller - 200 sheets
Printing speed:	40 pages per minute at 300 or 400 dpi, long edge feed on letter size paper
Toner replacement:	Bottle exchange (700g)
Power source:	120V, 60Hz, more than 12.0A (15 or 20 AMP circuit) (U.S.) 220~240V, 50/60Hz, more than 6.5A (15 or 20 AMP circuit) (Europe)
Power consumption:	Warm-up - less than 0.90 kilowatts (kw) Stand-by - less than 0.22 kw Maximum - less than 1.44 kw
Noise emission: **Sound pressure level**	Stand-by - 25 dB amperes (A) Printing - 59 dB (A) *The measurements are made according to ISO 7779 at the operator position
Noise emission: Sound power level	Stand-by - 40 decibels (dB) Printing - 69 dB (A) * The measurements are made according to ISO 7779 at the operator position

Component	Specification
Standard Centronics-compatible interface:	Standard 36-pin parallel cable and a parallel port available on the host computer. Do not use a parallel cable that is longer than ten feet (three meters).
Standard RS-232-C interface:	Standard 25-pin serial cable and a serial port available on the host computer. You can use a serial cable length of 10 feet to 50 feet (3 to 15 meters).
***Printer options:**	1000 sheet tray unit 1500 sheet tray unit Finisher bin 3-bin sorter Memory expansion to 72 MB (including the 8MB of base memory) Network interface card PostScript kit

*Printer options may vary based on your country.

Use the following precautions for the power connection:

- ❒ Connect the machine to a dedicated power source that meets the specifications listed in Table 5-1.
- ❒ Voltage must not fluctuate more than 10 percent.
- ❒ Make sure that the wall outlet is near the printer and easily accessible.
- ❒ Make sure that the printer plug is firmly inserted into the outlet.
- ❒ Do not set anything on top of the power cord.

Table 5-2 lists the printer size specifications.

Table 5-2. Printer size

Component	Width	Depth	Height
Printer with input tray and paper tray unit	115 cm 45.3 in	65.5 cm 25.8 in	102.4 cm 40.4 in
Printer with finisher, and paper tray unit	172.2 cm 67.8 in	65.5 cm 25.8 in	111.0 cm 43.8 in

Table 5-3 lists the printer weight specifications.

Table 5-3 Printer weight

Component	Weight
Printer with input tray and paper tray unit	137.5 kg 303.2 lb
Printer with finisher, and paper tray unit	178.5 kg 393.6 lb

Table 5-4 lists the optional printer equipment specifications.

Table 5-4. Optional equipment

Component	Specification
Finisher:	Staple position: Top, bottom, two staples Staple replenishment: Cartridge exchange (5,000 staples per) Power source: DC 24V (from printer) Power consumption: 48 W Weight: 35 kg, 77.2 lb Dimensions (W x D x H): 67.1 x 51.4 x 95.0 cm / 26.5 x 20.3 x 37.5 in
1000 sheet tray unit:	Paper weight: 52 to 105 gsm (14 lb to 28 lb) Paper capacity: 1,000 sheets (500 sheets of 80 gsm per tray) Power source: DC 24V, 5V, AC 120V (from printer) Power consumption: 50 W (average) to 110.5 W (maximum) Weight: 36 kg, 79.4 lb Dimensions (W x D x H):62.0 x 63.2 x 39.0 cm / 24.5 x 24.9 x 15.4 in
1500 sheet tray unit:	Paper weight: 52 to 105 gsm (14 lb to 28 lb) Paper capacity: 1,500 sheets (500 sheets of 80 gsm per tray) Power source: DC 24V, 5V, AC 120V (from printer) Power consumption: 50 W (average) to 110.5 W (maximum) Weight: 38 kg, 83.8 lb Dimensions (W x D x H):62.0 x 63.2 x 39.0 cm / 24.5 x 24.9 x 15.4 in
3-bin sorter:	Paper weight: (Face up) bin 1, 52 to 157 gsm (14 lb to 42 lb) bins 2 and 3, 52 to 105 gsm (14 lb to 28 lb) (Face down) 64 to 105 gsm (17 lb to 28 lb) Power source: DC 24V, 5V, AC 120V (from printer) Power consumption: 30W Weight: 13 kg, 28.7 lb Dimensions (W x D x H): 46.8 x 48.3 x 49 cm / 18.4 x 19 x 19.3 in

Component	Specification
Network interface card:	Required Ethernet or Token Ring card installed in the expansion Input/Output (I/O) slot on the printer to connect to an Ethernet or Token Ring network (refer to the *Network Printer Manager and User Guide for Printer Servers* for further information on the network connection).
PostScript kit:	Expansion ROM SIMM memory installed in the PostScript ROM expansion slot.

Table 5-5 lists the environmental specifications.

Table 5-5.Environmental Information

Component	Specification
Temperature:	10 to 30 degrees Centigrade
Humidity:	15 to 90 percent
Air circulation:	30 cubic meters, per person, per hour
Clearance:	28 inches above 1 inch on each side 5 inches in the rear
Altitude:	No higher than 2,000 meters (6,600 feet) above sea level

Avoid the following:

- ❒ Exposure to direct sunlight or strong light (more than 1,500 lux)
- ❒ Dusty areas
- ❒ Areas with corrosive gasses
- ❒ Frequent strong vibrations
- ❒ Direct exposure to cold air from an air conditioner or heated air from a heater (sudden temperature changes may cause condensation within the printer).

Printer Capabilities

This section contains information on the functionality of the printer bins as well as information and illustrations on the output capabilities of the machine.

Tray and Bin Functionality

This section contains information on the functionality of the 500 sheet tray, and the 1-bin finisher and 3-bin sorter.

The 500 sheet tray provides the following functionality:

- ❒ Face up
- ❒ Normal and reverse order
- ❒ Duplexing (face up)
- ❒ Document and Group sort
- ❒ Separation sheets.

The 1-bin finisher provides the following functionality:

- ❒ Face up
- ❒ Normal and reverse order
- ❒ Duplexing (face up)
- ❒ Document and Group sort
- ❒ Doggy tail separation
- ❒ Stapling.

Note: *Stapling is not available when you specify normal order.*

The 3-bin sorter (available for printing and copying functions) provides the following functionality:

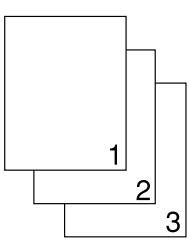
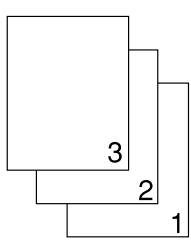
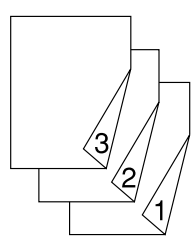
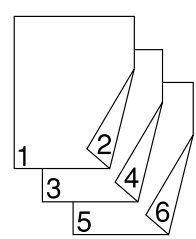
- Face up and face down
- Normal and reverse order
- Duplexing (face up)
- Document and Group sort
- Offset separation and separation sheets
- Bin selection.

Note: *Offset separation is available only when job separation is set to ON and the first bin is selected. Separations sheets are available only when job separation is set to ON and the second or third bin is selected.*

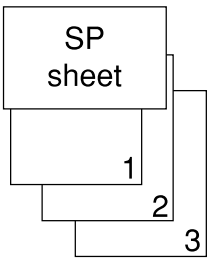
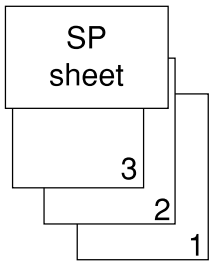
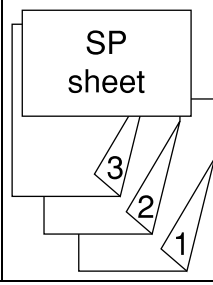
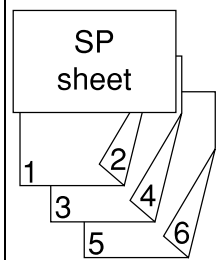
Output Capabilities

This section contains information and illustrations on the output capabilities of the machine.

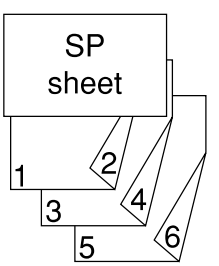
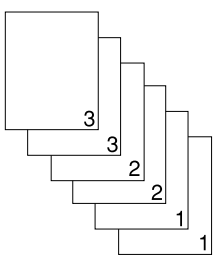
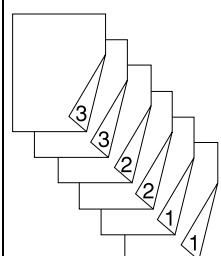
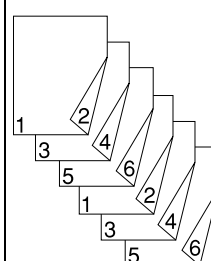
Single copy

Reverse order	Normal order	Normal order, face down, 3-bin sorter	Duplex
			

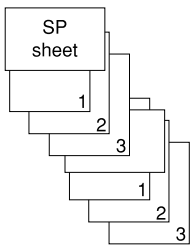
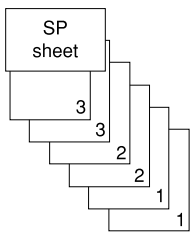
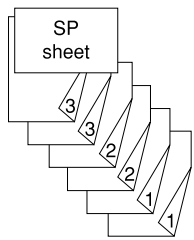
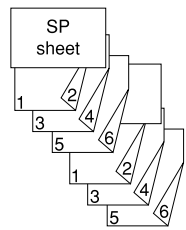
Single copy with job separation

Reverse order	Normal order	Normal order, face down, 3-bin sorter	Duplex
			

Multiple copies

Document sort reverse order	Group sort normal order	Group sort normal order 3-bin sorter	Duplexing
			

Multiple copies with job separation

Document sort reverse order	Group sort normal order	Group sort normal order 3-bin sorter	Duplexing
			

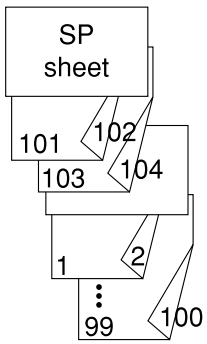
Note: *Job separation sheets are available only when another paper tray is loaded with paper of the same size in the opposite orientation (for example, when the job prints on 8 1/2 x 11 SEF, 8 1/2 x 11 LEF must be available for a separation sheet).*

Single copy with duplexing (over 30/50 sheets)

When a duplexed document exceeds 50 sheets, a separation sheet is inserted after every 50th sheet.

Print stream:

1. Print duplexed pages 1-100.
2. Separation sheet inserted.
3. Print pages 101-104.
4. Separation sheet inserted (end of job).

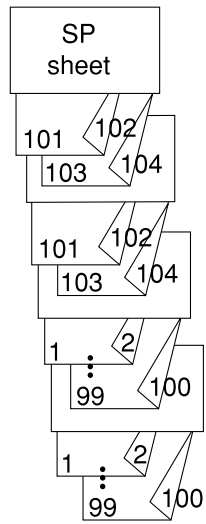


Multiple copy with duplexing (over 30/50 sheets)

When multiple copies of a duplexed document exceed 50 sheets, a separation sheet is inserted after every 50th sheet.

Print stream (2 copies of a 104 page document):

1. Print pages 1-100 (1st copy).
2. Separation sheet inserted.
3. Print pages 1-100 (2nd copy).
4. Separation sheet inserted.
5. Print pages 101-104 (1st copy).
6. Separation sheet inserted.
7. Print pages 101-104 (2nd copy).
8. Separation sheet inserted (end of job).



Note: *The threshold value of 30 or 50 sheets is set by the service technician.*

INTERFACE

This section provides information on the types of connectors and cables you use to connect your printer to your host computer. You can connect the printer to your host computer using either a parallel or a serial port. It is your responsibility to provide the cable necessary for the interface you want to use to connect to your host computer. The cable is not provided with the machine.

To use the machine with a PC network, you can connect to the network in one of the following ways:

- Connect the machine to a computer that is connected to a local area network (LAN). If the printing software for the network resides on the computer to which you connect the machine, this computer can act as a print server, spooling and managing print jobs for the users on the network.
- Directly connect the machine to an Ethernet or Token Ring LAN by providing the appropriate physical connection. When you connect to the network in this manner, you do not have to dedicate a specific computer as the print server.

Regardless of how you connect to the network, you will probably choose to use a parallel interface for your connection as this interface can handle more data than the serial interface in a shorter period of time.

Refer to the "Setting up the Printer" chapter in this manual for information on how to connect the printer to your host computer.

Serial Interface

The serial connection is a standard connector for serial port interfaces and requires a standard serial cable and a serial port available on the host computer. You can use a serial cable length of 10 feet to 50 feet (3 to 15 meters).

RS-232-C Serial Interface

The printer provides a standard RS-232-C 25-pin connector for a serial port interface. Most IBM-compatible computers have a serial port, designated COM1, that has a 25-pin connector.

Table 5-6 lists the 25-pin designations and associated signals for serial communications.

Table 5-6. RS-232-C 9-pin serial pin designations

Code	Signal	Pin
GND	Signal Ground	1
TD-232	Transmit Data	2
RD-232	Receive Data	3
(N/C)	(Not Connected)	4
(N/C)	(Not Connected)	5
DSR	Data Set Ready	6
GND	Signal Ground	7
(N/C)	(Not Connected)	8
(N/C)	(Not Connected)	9
(N/C)	(Not Connected)	10
(N/C)	(Not Connected)	11
(N/C)	(Not Connected)	12
(N/C)	(Not Connected)	13
(N/C)	(Not Connected)	14
(N/C)	(Not Connected)	15
(N/C)	(Not Connected)	16
(N/C)	(Not Connected)	17
(N/C)	(Not Connected)	18
(N/C)	(Not Connected)	19

Code	Signal	Pin
DTR	Data Terminal Ready	20
(N/C)	(Not Connected)	21
(N/C)	(Not Connected)	22
(N/C)	(Not Connected)	23
(N/C)	(Not Connected)	24
(N/C)	(Not Connected)	25

The wiring tables and diagrams below show the signal path and connection configuration for a 25-pin to 25-pin configuration. Table 5-7 lists the 25-pin to 25-pin signal path configuration.

Table 5-7. 25-pin printer to 25-pin computer signal path configuration

Printer Code	Pin	Pin	PC Host Code
GND	**1**	**1**	GND
TXD	**2**	**3**	RXD
RXD	**3**	**2**	TXD
RTS	**4**	**8**	CD
CTS (NC) 5	**5**	**8**	CD
DSR	**6**	**20**	DTR
GND	**7**	**7**	GND
CD (NC)	**8**	**4**	RTS
CD (NC)	**8**	**5**	CTS
DTR	**20**	**6**	DSR

Parallel Interface

The parallel connection is a standard Centronics-compatible interface and requires a standard 36-pin parallel cable and a parallel port available on the host computer. Do not use a parallel cable that is longer than ten feet (three meters). In general, parallel ports are used more frequently than serial ports because they send data to the printer more quickly.

Table 5-8 lists the Centronics parallel pin designations and associated signals.

Table 5-8. Centronics Parallel pin designations

Code	Signal	Pin
STROBE	Strobe	1
D<0>	Data	2
D<1>	Data	3
D<2>	Data	4
D<3>	Data	5
D<4>	Data	6
D<5>	Data	7
D<6>	Data	8
D<7>	Data	9
ACK*	Acknowledge	10
BUSY	Busy	11
PE	Paper Error	12
SEL	Select Out	13
AUTOFD*	Auto Feed	14
(N/C)	(Not Connected)	15
GND	Ground	16
GND	Ground	17
+5 VDC	5 Volts Direct Current	18
GND	Ground	19
GND	Ground	20
GND	Ground	21
GND	Ground	22
GND	Ground	23
GND	Ground	24
GND	Ground	25
GND	Ground	26
GND	Ground	27
GND	Ground	28
GND	Ground	29
GND	Ground	30
INIT*	Initialization	31
FAULT*	Fault	32
(N/C)	(Not Connected)	33
(N/C)	(Not Connected)	34
(N/C)	(Not Connected)	35
SELIN	Select In	36

MEDIA

To ensure good printing results, use only paper and transparencies that are designed for use with laser printers.

Note: *Make sure that any paper you use is free of wrinkles, rips, dust and oil residue. Using print media that does not meet the media guidelines contained in this section can cause damage to your printer.*

A. FONTS

FONTS

This section contains information on the fonts that are supported by the printer. This section also contains information on how to select supported fonts and how to use additional fonts.

Fonts are the style of characters you can use for your printed documents, for example, Times New Roman (abcdefg ABCDEFG) and Wingdings (♋♌♍♎♏♐♑✌✍☜☞☝). This section describes the fonts available with the machine.

The two basic types of fonts are scaleable and bitmap. When you send a document to the printer, you can specify that you want the printer to set the scaleable fonts to the size you want. This allows you to print scaleable font characters using almost any available font size. Bitmap fonts are predefined and are not scaled or changed during printing. However, for each bitmap font, you can specify a point size (height of the font), pitch (number of characters per inch), and orientation (portrait or landscape).

Using Fonts

This section contains information on the fonts that are supported by the printer, as well as information on how you can use these fonts in your print jobs.

Built-In Fonts

Built-in fonts are provided with the printer for both the PCL 5e and PostScript printer languages.

Note: *The PostScript fonts are only available when you have the PostScript option.*

PCL 5e Built-in Fonts - the PCL 5e built-in fonts consist of both scaleable and bitmap fonts. The supported fonts and symbol sets are listed in this section.

❒ The following PCL 5e scaleable fonts are provided with the printer:

- **Albertus Extra Bold**
- Albertus Medium
- Antique Olive
- **Antique Olive Bold**
- *Antique Olive Italic*
- Arial
- **Arial Bold**
- ***Arial Bold Italic***
- *Arial Italic*
- CG Omega
- **CG Omega Bold**
- ***CG Omega Bold Italic***
- *CG Omega Italic*
- CG Times
- **CG Times Bold**
- ***CG Times Bold Italic***
- *CG Times Italic*
- *Coronet*
- **Clarendon Condensed**
- Courier
- **Courier Bold**
- ***Courier Bold Italic***
- *Courier Italic*
- Garamond Antiqua
- Garamond Halfbfett
- *Garamond Kursiv*
- *Garamond Kursiv Halfbfett*
- Letter Gothic
- Letter Gothic Bold
- *Letter Gothic Italic*
- *Marigold*
- Symbol (Σψμβολ)
- Times New Roman
- **Times New Roman Bold**
- ***Times New Roman Bold Italic***
- *Times New Roman Italic*
- **Univers Bold**
- ***Universe Bold Italic***
- **Universe Condensed Bold**
- ***Universe Condensed Bold Italic***
- Univers Medium
- **Universe Medium Condensed**
- ***Universe Medium Condensed Italic***
- *Universe Medium Italic*
- Wingdings ☎♦✈■♈♎✈■♈♦①

The following Symbol Sets, used for scaleable typefaces, are provided with the printer:

- ASCII
- Desktop
- ISO French
- ISO German
- ISO Italian
- ISO Latin 1
- ISO Latin 2
- ISO Latin 5
- ISO Norwegian
- ISO Spanish
- ISO Swedish
- ISO United Kingdom
- Legal
- Math-8
- MC Text1
- Microsoft Publishing
- Names
- PC-8
- PC-8 DN
- PC-850
- PC-852
- PC-Turk
- PI Font
- PS Math
- PS Text
- Roman-8
- Symbol1 (Συμβολ)
- Ventura International
- Ventura Math
- Ventura US
- Windows 3.0 Latin 1
- Windows Latin 1
- Windows Latin 2
- Windows Latin 5
- Wingdings1

- ❒ The PCL 5e Line Printer bitmap font is provided with the printer. This bitmap font is available in medium, 16.65 pitch, 8.5 points, landscape and portrait, in six typefaces.

PostScript Fonts - the optional PostScript built-in fonts consist of Type I scaleable fonts. These include text fonts, Zapf Dingbats, and Symbol fonts. For Type I fonts, the character set determines which characters and special symbols are available with a specific font.

The text fonts use the ISO Latin 1 character set, which includes the standard alphabet of all uppercase and lowercase letters, standard punctuation characters, the digits 0 through 9, and some special characters. The Zapf Dingbats character set includes characters such as special bullets and checkmarks. The Symbol character set includes math symbols and Greek characters. The printer can interpret any PostScript Level I or Level II page description file.

In addition, depending on the software you use to create the document you want to print, the optional PostScript language provides you with the capability to manipulate the text contained in a PostScript file, allowing you to perform tasks such as stretching, rotating, bending, defining the shape, scaling, and clipping the text.

❒ The following PostScript Type I scaleable fonts are provided with the printer when you have the PostScript option:

- Courier
- **Courier Bold**
- ***Courier Bold Oblique***
- *Courier Oblique*
- Helvetica
- **Helvetica Bold**
- ***Helvetica Bold Oblique***
- *Helvetica Oblique*
- Helvetica Condensed
- **Helvetica Condensed Bold**
- ***Helvetica Condensed Bold Oblique***
- *Helvetica Condensed Oblique*
- Helvetica Narrow
- **Helvetica Narrow Bold**
- ***Helvetica Narrow Bold Oblique***
- *Helvetica Narrow Oblique*
- ITC Avant Garde Book
- *ITC Avant Garde Book Oblique*
- ITC Avant Garde Demi
- *ITC Avant Garde Demi Oblique*
- **ITC Bookman Demi**
- ***ITC Bookman Demi Italic***
- ITC Bookman Light
- *ITC Bookman Light Italic*
- *ITC Zapf Chancery Medium Italic*
- ITC Zapf Dingbats (✠✻■▼▲)
- New Century Schoolbook Roman
- **New Century Schoolbook Bold**
- ***New Century Schoolbook Bold Italic***
- *New Century Schoolbook Italic*
- Palatino Roman
- **Palatino Bold**
- ***Palatino Bold Italic***
- *Palatino Italic*
- Symbol (Συμβολ)
- Times Roman
- **Times Roman Bold**
- ***Times Roman Bold Italic***
- *Times Roman Italic*

Additional Fonts

Additional fonts are available as follows:

- When you print a document, the software used to create the document may download additional fonts. These downloaded fonts can include TrueType fonts available from Windows and Macintosh software.

Note: *When you have the PostScript option, documents previously formatted with TrueType fonts print using PostScript Type I fonts when the TrueType font is not available. The machine automatically substitutes the TrueType font with the closest matching PostScript Type I font.*

- You can download additional soft fonts from diskettes to your printer using a software utility designed for this purpose. Software of this type includes Adobe Type Manager, which you can use to download PostScript soft fonts as necessary.

Downloading Soft Fonts (PCL only)

Before downloading soft fonts, consider the following:

- Downloaded fonts take up RAM and hard disk memory on your printer. Therefore, you may want to limit the number of fonts you use at any one time. If you need to use numerous fonts other than those resident on the printer, you should expand the printer RAM.
- When more than one person is using the machine as a printer, you should decide which fonts will be downloaded, and the ID numbers to be used, before they are downloaded. When the printer is connected to a network, the System Administrator should be consulted before any fonts are downloaded.

- When you download soft fonts, make sure to follow the directions provided with your utility software. Regardless of what utility you use, you must assign the font a status as follows:
  - **Font Status** - The font status is designated as either temporary or permanent. When you assign temporary status to a font, it remains available until the printer is reset, the font is deleted, the job is finished, or the printer is turned off. When you assign permanent status to a soft font, it remains available until the font is deleted or the printer is turned off.

Deleting Soft Fonts

Soft fonts are deleted when the following conditions occur:

- The printer is turned off.
- A new font is downloaded using the same ID number as an existing font.

Selecting Fonts

You can select fonts for use in your print job as follows:

- Using your document software.
- Using the printer control panel.

Note: *The printer defaults to the Control Panel settings for the font when no software commands and no PCL printer commands are received.*

B. MEMORY AND OPTIONS

MEMORY

This section contains information on the memory provided with, and available for, the machine. It also contains instructions on installing additional DRAM SIMM modules.

Configuration

The machine is provided with an internal fixed hard disk and supports ROM and RAM memory in static and expandable configurations.

Hard Disk

The machine is provided with an IDE hard disk. The disk is used to store downloaded fonts, spool print input data, and store print image data, as required for face-up output, and duplex printing.

Partitioning

The hard disk partitioning is used as follows:

- Permanent Partition - used by PCL 5e for font and macro storage. This partition is formatted by an explicit command received from the printer Control Panel.
- PostScript Partition - used exclusively by the PostScript option. This separate partition allows PostScript to format its disk as required by the PostScript command programs without affecting the other disk partitions.

Dynamic Random Access Memory

The base configuration of the machine includes eight megabytes (8 MB) of onboard Dynamic Random Access Memory (DRAM). You can request additional DRAM SIMM modules. Up to 64 MB of additional DRAM can be requested for a maximum of 72 MB of DRAM. The DRAM specifications are as follows:

- 72 pin
- 8, 16, or 32 MB DRAM SIMM module.
- 70 nanoseconds or faster.

Note: *The machine allocates PostScript memory according to the recommendations specified by Adobe. Based on the amount of RAM installed, a fixed amount of RAM is allocated for storage of incoming input data.*

Installing DRAM SIMM Modules

Installation of DRAM SIMM modules is performed by a service technician.

POSTSCRIPT

This section contains general information on the optional PostScript function available with the machine. This information includes supported fonts, supported languages, and programming references.

Features

The PostScript option is a page description language from Adobe Systems, Inc. that is available with many IBM compatible and Macintosh software applications. Your software application can use the PostScript language to provide page information to the printer. During printing, this information is interpreted by the printer to produce the specified page output.

The PostScript option supports Adobe PostScript Level II, provides 39 built-in typefaces, and can print each typeface in any point size.

The PostScript option also supports the downloading of PostScript Type I fonts and includes a rasterizer that allows you to download TrueType fonts as soft fonts. Resident PostScript TrueType fonts are not supported.

In addition, depending on the software you use to create the document you want to print, the PostScript language provides you with the capability to manipulate the text contained in a PostScript file, allowing you to perform tasks such as stretching, rotating, bending, defining the shape, scaling, and clipping the text.

Note: *The PostScript language is different than other languages that use control codes and basic printer commands such as Line Feed and Form Feed are not used or understood. Therefore, you cannot use the PostScript option with software applications that do not support the PostScript language.*

For more information on the PostScript language, ☛refer to the PostScript Language Reference Manual.

NETWORK INTERFACE

This section contains general information on the Network Interface option, including the supported networks and protocols.

Features

The machine provides one expansion I/O slot that you use for network connectivity. This I/O slot supports an Ethernet or Token Ring card. The optional network connection card is installed by your service representative.

The following are the network operating systems and protocols supported by the machine.

- ❒ IPX/SPX (Novell NetWare)
- ❒ TCP/IP
- ❒ Apple

For more information on network connectivity and how to connect the machine to the network using a parallel or serial cable, ☛ refer to the "Setting Up the Printer" chapter in this manual. For detailed information on using the machine with a network connection, ☛ refer to the network interface documentation provided with this option.

C. TRAY SPECIFICATIONS

NORTH AMERICA TRAY SPECIFICATIONS

This section contains a table that illustrates the North America input tray and duplex tray specifications for the machine. The following symbols are used in this table:

- ⭘ – Available for standard input tray operation
- ★ – Available for manual input tray operation
- ◆ – Available for duplex tray operation
- V – Not available

Table C-1. North America paper tray specifications

Paper Name		Standard Input Tray	Manual Input Tray	Bank Input Tray	LCT	Duplex
DLT	(11"x17")	⭘	★	⭘	V	◆
LG	(8 1/2"x14")	⭘	★	⭘	V	◆
LT-SRT	(8 1/2"x11")	⭘	★	⭘	V	◆
LT-LONG	(11"x8 1/2")	⭘	V	⭘	⭘	◆
EXEC-SRT	(7 1/4"x10 1/2")	V	★	V	V	V
HLT-SRT	(5 1/2"x8 1/2")	V	★	V	V	V
HLT-LONG	(8 1/2"x5 1/2")	⭘*1	V	V	V	V
A3		⭘	★	⭘	V	◆
B4		⭘	★	⭘	V	◆
FOLIO	(8 1/4"x13")	⭘	★	⭘	V	◆
A4-SRT		⭘	★	⭘	V	◆
A4-LONG		⭘	V	⭘	⭘	◆
B5-SRT		V	★	V	V	◆
A5-SRT		V	★	V	V	V
A5-LONG		⭘	V	V	V	◆
A6-SRT		V	★	V	V	V
F/GL	(8"x13")	⭘	★	⭘	V	◆
Foolscap	(8 1/2"x13")	⭘	★	⭘	V	◆

*1.If equipping the 3-bin tray, this is not available

You can use B5 in the manual tray only. When you use the machine as a printer, you cannot perform a duplex operation using the manual tray.

EUROPEAN TRAY SPECIFICATIONS

This section contains a table that illustrates the European input tray and duplex tray specifications for the machine. The following symbols are used in this table:

- ⊙ - Available for standard input tray operation
- ★ - Available for manual input tray operation
- ◆ - Available for duplex tray operation
- V - Not available

Table C-2. European paper tray specifications

Paper Name		Standard Input Tray	Manual Input Tray	Bank Input Tray	LCT	Duplex
DLT	(11"x17")	⊙	★	⊙	V	◆
LG	(8 1/2"x14")	⊙	★	V	V	◆
LT-SRT	(8 1/2"x11")	⊙	★	⊙	V	◆
LT-LONG	(11"x8 1/2")	⊙	V	⊙	⊙	◆
EXEC-SRT	(7 1/4"x10 1/2")	V	★	V	V	V
HLT-SRT	(5 1/2"x8 1/2")	V	★	V	V	V
HLT-LONG	(8 1/2"x5 1/2")	⊙*1	V	V	V	V
A3		⊙	★	⊙	V	◆
B4		⊙	★	⊙	V	◆
FOLIO	(8 1/4"x13")	⊙	★	⊙	V	◆
A4-SRT		⊙	★	⊙	V	◆
A4-LONG		⊙	V	⊙	⊙	◆
B5-SRT		⊙	★	V	V	◆
B5-LONG		⊙	V	⊙	V	◆
A5-SRT		V	★	V	V	V
A5-LONG		⊙	V	V	V	◆
A6-SRT		V	★	V	V	V
F/GL	(8"x13")	⊙	★	⊙	V	◆
Foolscap	(8 1/2"x13")	⊙	★	⊙	V	◆

*1.If equipping the 3-bin tray, this is not available

When you use the machine as a printer, you cannot perform a duplex operation using the manual tray.

GLOSSARY

ACRONYMS

This section contains a list of the acronyms you may use while working with the printer and the printer documentation.

ASCII	American Standard Code for Information Interchange
ATP	AppleTalk Transaction Protocol
bpi	bits per inch
bps	bits per second
cpi	characters per inch
CPK	Control Panel Kernel
CPU	Central Processing Unit
CR	Carriage Return
^D	End of job indicator for PostScript
DIMM	Dual Inline Memory Module
DMA	Direct Memory Access
DOS	Disk Operating System
dpi	dots per inch
DRAM	Dynamic Random Access Memory
EBDCIC	Extended Binary Coded Decimal Interchange Code
EEPROM	Electronically Erasable Programmable Read Only Memory
ENET	Ethernet network
EOF	End of File

EOS	End of Session
ESC	Escape (ASCII character 0x1b)
ETX	End of Text (ASCII character 0x03)
FF	Form Feed (ASCII character 0x0c)
FIS	Font Interchange Standard
GRS	Graphics Services Module
HP	Hewlett Packard
HPGL/2	Hewlett Packard Graphics Language level 2
IBM	International Business Machines
I/O	Input/Output
ips	inches per second
IPX/SPX	Internetwork Packet Exchange/Sequenced Packet Exchange
LAN	Local Area Network
LED	Light Emitting Diode
LF	Line Feed Character
LLAP	LocalTalk Link Access Protocol
LPD	line printer daemon
lpi	lines per inch
MB	Megabyte
MPT	Multi-Purpose Tray

NIC	Network Interface Card
NVRAM	Non-Volatile Random Access Memory
OS	Operating System
OSS	Operating System Software
PC	Personal Computer
PCL	Printer Control Language
PCL5	Printer Control Language - Version 5
PCMCIA	Personal Computer Memory Card International Association
PDL	Printer Description Language
PJL	Printer Job Language
ppm	pages per minute
RAM	Random Access Memory
ROM	Read Only Memory
SCSI	Small Computer Systems Interface
SDD	Serial Device Driver
SIMM	Single Inline Memory Module
SOH	Start of Header (ASCII character 0x01)
spi	spots per inch
STX	Start of Text (ASCII character 0X02)
TES	terminate and stay resident terminal emulation program
UCS	Universal Character Set

UCSB Universal Character Set Buffer

VM Virtual Memory

XON Transmit On (ASCII character 0x11)

XOFF Transmit Off (ASCII character 0x13)

TERMS

This section contains a list of the terms you may use while working with the printer and the printer documentation.

A3 Standard international paper size (11.69 in by 16.54 in or 297 mm by 420 mm).

A4 Standard international paper size (8.27 in by 11.69 in or 210 mm by 297 mm).

AppleTalk Local area network (LAN) from Apple Computer that is built into Macintosh computers.

application Software program used to process information.

ASCII American Standard Code for Information Interchange. Standard 7- or 8-bit code representing alphanumeric and numerous nonprinting character by assigning to each a binary number from 128 available characters. Used for the exchange of information among data communication and data processing systems and their associated equipment.

asynchronous Data communication transmission that are controlled by start and stop characters, causing the time intervals between the transmission of data blocks to be unequal in length.

B4 Standard international paper size (9.84 in by 13.9 in or 250 mm by 353 mm).

baud rate Establishes the transmission speed of data for a serial connection between the machine and a host computer.

bit Abbreviation for a binary digit. This is the smallest unit of information recognized by a computer.

bitmap font Font that is predefined and not scaleable or changeable when printing.

bps Bits per second. The rate at which data is transferred during serial communication.

buffer Area of memory used for storage during the transfer of data between two devices. built-in fonts Fonts provided with the printer (also called internal fonts)

byte Number of bits (usually fixed at 8) that are processed as a single binary value. C5 Standard international envelope size (6.38 in by 9.02 in or 162 mm by 229 mm).

Centronics Standard type of parallel interface connector used to connect the machine to a host computer.

character set PostScript term that refers to specific sets of letters, numbers, punctuation marks, and special symbols.

configuration Settings required to allow your computer to communicate properly with the machine. Also describes the process of specifying the required settings.

cpi Characters per inch. Expression of the fixed-pitch font size that allows the font to be set in increments of one horizontal inch. See also *pitch*.

data bits Serial port setting that allows you to specify the number of bits used in print data.

default Value retained in the memory for use when input is not specified by the user for a required variable.

DIN-8 Standard serial connector used to connect the machine to a host computer.

Document Description Language (DDL) Printer language used to describe print jobs to a laser printing system. DDL describes the input (type, format, characteristics), performs the processing functions (logical processing), and describes the output (type, format, font selection, accounting options) for an entire print job.

dot Printed element (in pixels). The number of dots that print in an inch is used to measure the total resolution (300 dots per inch).

dpi Dots per inch. The number of dots that print in an inch. These are used to form a character or graphic on the printed page.

drivers Software used to provide printer characteristics. Printer drivers convert software commands into printer language.

duplex Printing on two sides of a single sheet of paper.

emulation Simulating of the function of another software or hardware product.

Embedded Printer Commands Option supported by some applications allowing a user to manually enter printer commands.

Escape Sequence PCL 5 commands beginning with an escape character that are used to control printer functions. These commands are usually sent by applications. However, they can be sent manually by the user.

Ethernet Local area network (LAN) that provides the capability to transmit data between devices through a cable.

fixed-pitch font Font for which each character is the same width.

font Set of characters for a specific typeface family, each having the same point size, style, orientation, and weight.

font characteristics Symbol set, spacing, pitch, point size, style, stroke weight, and typeface that specify the appearance of a font.

font width The horizontal spacing of a font.

hexadecimal System of numbering using a base of 16.

image area Area of the printed page that can contain graphics or text.

initialize Setting all computer system information to the starting or default values.

internal fonts Fonts provided with the printer (also called built-in fonts).

IPX Internetwork packet Exchange. Protocol that provides connectionless service between nodes to transport higher layer packets. Connectionless service is communication in one direction that does not require an acknowledgement (delivery is assumed).

keyword Required portion of a command.

landscape Printing orientation in which graphics and text are printed parallel to the long edge of the paper.

Legal Standard international paper size (8.5 in by 14 in or 216 mm by 356 mm).

Letter Standard international paper size (8.5 in by 11 in or 216 mm by 279 mm).

line feed Control character used to specify that the printer begins printing in the current character position on the following line. Also used to specify a line end.

line printer daemon (LPD) Common print protocol.

long-edge feed Moving the paper through the machine in the direction of the paper length.

Megabyte (MB) Unit made up of one million bytes.

monochrome Printing in one color.

network Hardware and software system that allows multiple users to share common resources, including printers, using connected computers and terminals.

Network Interface card Optional processor board (NIC) that provides the machine with an interface to a network.

offset Printed sets of output placed in varying positions in the output bin to separate collated sets.

operating system Software that controls the low-level tasks in a computer system (for example, input or output and memory management). The operating system is active when the computer is running.

orientation Specifies whether the lines on the printed output are parallel to the long edge of the paper (landscape) or the short edge of the paper (portrait).

origin Upper left corner of a page.

Page Description Language (PDL) Printer language used to describe pages within a print job to a laser printing system. PDL describes the input (type, format, characteristics), performs the processing functions (logical processing), and describes the output (type, format, font selection, accounting options) for a page within a print job.

page end Command character (form feed) that terminates the current page.

parameter Portion of a command, other than the keyword. See also *keyword*.

parity Serial port setting used to detect transmission errors.

physical page Actual page size used during printing.

pica
1. Unit of measurement equal to twelve points (approximately 1/6 of an inch).
2. 10-pitch typeface with ten characters per inch each 12 points in height. See also *point*.

pitch Width of a fixed-pitch font specified in characters per horizontal inch.

pixel Acronym for a single element of a picture. This is the smallest addressable point on a bitmapped screen to which color and intensity can be assigned.

point A unit of measurement equal to 0.0139 of an inch. Used to express type, size, and leading spaces. There are 12 points to a pica and approximately 72 points to an inch. See also pica.

PostScript Printer language (PS) created by Adobe Systems, Inc.

printer driver Software that allows a host computer to communicate with a printer.

proportional-space font Characteristic of a font family in which characters are assigned individual horizontal spacing. Proportionally spaced fonts are used by publishing applications to improve appearance and readability.

protocol Controls the signals used to establish the serial connection between the machine and a host computer.

queue Managed database of documents waiting to be processed.

RAM Random Access Memory. Portion of memory where print data, macros, and downloaded fonts are stored.

raster graphics Graphic created using a pattern of printed dots.

Raster image processor (RIP) Processor board that builds a raster image that is passed to the printer.

rasterization Transformation of an image onto a page using bitmap dots.

resolution Number of dots per inch (dpi) or spots per inch (spi). The greater the number of dots or spots per inch, the higher the resolution and the clearer the image. The terms dots, spots, and pixels are synonymous.

RS-232 Standard serial interface connector used to connect the machine to an IBM host computer.

RS-422 Standard serial interface connector used to connect the machine to an Apple host computer.

scale Adjusting font or image size according to specified proportions.

set Multiple copies of a single print job.

short-edge feed Moving the paper through the printer in the direction of the paper width (the short side of a sheet of paper).

simplex printing Printing on one side of a single sheet of paper.

soft font Fonts available on diskettes for downloading to the memory of the printer (also called downloadable fonts).

spacing Fixed or user-selected distance between individual printed characters on a horizontal line.

spooling Process of releasing data from main memory and temporarily storing it until a peripheral device is ready to accept it (for example, storing print data before sending it to a printer).

spot Single element of a picture element imaged by the printer (also called a dot or a pixel).

SPX Sequenced Packet Exchange. Connection-oriented protocol used to guarantee delivery and error control of packets. The sender returns an acknowledgment of receipt or failure.

statement Detailed instructions contained in a program step that is written according to specific rules called syntax.

string Connected sequence of alphanumeric characters treated as one unit of data by a program.

stroke weight Thickness of a character (for example, medium or bold).

style Shape of a font (for example, upright or italic).

symbol set Specialized sets of characters available for a specific font.

syntax Rules governing the structure of expressions contained in a programming language.

TES Terminate and stay resident terminal emulation program. The printer server supports this protocol and allows the user to use TEX for printer server login.

throughput Measure of the number of pages printed during a specific unit of time, usually expressed as pages per minute.

Treatment Emphasis placed on a font (for example, italic or bold). Treatment describes both style and stroke weights.

truncated Cut off before completion, as when data transfer from a host to a printer is canceled before all data is transmitted.

typeface Features that give the font type a uniform appearance.

weight Perceived blackness of a character affected by varying the width of the stroke. Weight is expressed in general terms as either bold or roman.